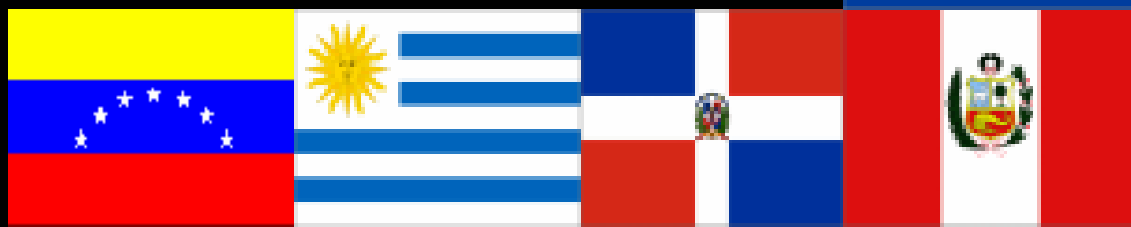


Inter-American Air Forces Academy (IAAFA)



Course 2006 Catalog



COMMANDANT'S NOTE

“Educated societies have always placed education as the foundation of their institutions.”

Simón Bolívar

It is a pleasure, both for me and for the Inter-American Air Forces Academy (IAAFA), to offer our customers this catalog of courses available at our Academy for calendar year 2006. The catalog's purpose is to assist host governments and security assistance offices (SAOs) in the selection and preparation of students slated to attend training. In addition, this catalog serves as reference for the United States Air Force (USAF) and other security assistance agencies.

The Inter-American Air Forces Academy is part of the USAF's Air Education and Training Command. Commanders who decide to send students can rest assured that graduates are fully prepared to carry out their duties, armed with the skills outlined in this catalog and in accordance with the highest standards.

The majority of the suggestions we received during our visits to your countries have been incorporated in this catalog. IAAFA will distribute revisions or additions made to this catalog during the calendar year and they will also appear in IAAFA's web page. Please forward proposed changes to 837 TRSS/SSR, 2431 Carswell Avenue, Lackland AFB TX 78236-5609.

If you wish to receive additional copies of this publication, please address your request to 837 TRSS/SSR, 2431 Carswell Avenue, Lackland AFB TX 78236-5609. Furthermore, there is an electronic version of this catalog on the Internet at the following web site: www.lackland.af.mil/iaafa/pub. This catalog replaces the 2005 catalog; therefore, all previous editions are obsolete.

I sincerely hope that the students attending IAAFA courses have pleasant, productive stays, and that the exchange of cultures and experiences will serve to further strengthen the bonds of friendship and brotherhood that unite the Americas.

JUAN MORENO III, Colonel, USAF
Commandant

IAAFA 2005 CURRICULUM REVIEW RESULTS

IAAFA conducted its annual curriculum review 15-16 March 2005 chaired by Colonel Blackwelder, 12AF/A-3. Based on extremely low student attendance, the F-5E/F Aircraft (MASL 148202) is being considered for deletion. We are concerned about country support for this course and hope to get a positive change in student flow; otherwise the course will be deleted at the 2006 annual curriculum review (Mar 2006). As an attempt of good faith, we are asking our customer countries to look at their respective training needs and properly evaluate their current and future requirements. All of our courses serve definite needs and for that reason we want to keep each one productive.

IAAFA GRADUATES
(As of 1 January 2005)

ARGENTINA	524
BELIZE	19
BOLIVIA	1,681
BRAZIL	293
CHILE	1,596
COLOMBIA	6,319
COSTA RICA	444
CUBA	263
DOMINICAN REPUBLIC	1,326
ECUADOR	3,556
EL SALVADOR	2,298
GUATEMALA	1,243
GUYANA	21
HAITI	46
HONDURAS	2,257
JAMAICA	4
MEXICO	2,563
NICARAGUA	849
PANAMA	1,439
PARAGUAY	642
PERU	1,702
SPAIN	2
SURINAME	6
TRINIDAD TOBAGO	11
UNITED STATES	58
URUGUAY	882
VENEZUELA	2,532

TOTAL RESIDENT **32,576**

TOTAL MOBILE TRAINING TEAM **4,524**

TOTAL IAAFA GRADUATES **37,100**

OPR: 837 TRSS/SSR (Registrar)
2431 Carswell Ave
Lackland AFB TX
78236-5609

DSN: 473-5593
Commercial: (210) 671-5593

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NOTE: * Indicates changes.

COURSE LISTING BY CATEGORY, MASL ID, TITLE, DURATION, STUDENT AND PAGE

The following are the established course minimum and maximum student loads for in-residence basic and advanced courses. These loads are based upon safety requirements and instructor and equipment availability. Therefore, any request for deviation from either the minimum or maximum loads will be evaluated and considered on a case-by-case basis by Air Force Security Assistance and Training (AFSAT) or the IAAFA Commandant. The course length may vary due to holidays and other special events.

PROFESSIONAL DEVELOPMENT COURSES

MASL. ID	Title	Duration (Weeks)	Student		Page
			Min.	Max.	
D171032	* Squadron Officer Course	7	8	12	10
D171033	Noncommissioned Officer Professional Development	7	8	12	13

OPERATIONS AND SUPPORT TRAINING COURSES

MASL. ID	Title	Duration (Weeks)	Student		Page
			Min.	Max.	
D121064	Pilot Instrument Procedures	11	6	*12	16
D121065	Instructor Pilot Instrument Procedures	11	6	*12	19
D121066	Search and Rescue (SAR)	5	6	12	22
D151023	Foreign Military Sales (FMS)	*6	6	16	24
D152054	International Logistics	9	6	16	27
D152055	Supply Management	9	6	16	31
D155065-01	Information Technology	8	3	12	34
D162030	On-The-Job Training (OJT) Administration	4	4	10	36
D166041	Technical Training Instructor	8	4	10	38
D172023	Introductory Air Intelligence	6	6	10	40
D172045	Intermediate Air Intelligence	6	4	10	42
D173056	Ground Defense Skills	6	24	44	45
D173067	Special Reaction Team	6	5	15	47
D173068	* Security Forces Apprentice	6	24	44	49
D126013	* International Anti-Terrorism I	1	5	20	51
D126014	* International Anti-Terrorism II	1	5	20	53
D176006	Rule of Law and Disciplined Military Operations	1	10	20	55
D117060	Human Factors in Aviation	1	8	20	57

AVIONICS/ELECTRONIC MAINTENANCE TRAINING COURSES

MASL. ID	Title	Duration (Weeks)	Student Min. Max.		Page
First Level Courses					
D131119-01	Electronic Fundamentals	12	2	8	60
D133060-01	Avionics Communication/ Navigation Equipment Technician	12	4	*8	63
D132080-01	Ground Radio Communications Equipment Technician	12	4	8	65
D141253-01	Avionics Instrument Technician	12	4	12	68
D141254-01	Aircraft Electrical Fundamentals Technician	12	4	12	71
Advanced Avionics/Electronic Courses					
D131123-01	General Maintenance Repair and Basic soldering	5	2	6	73
D141244	Nickel-Cadmium Battery Technician	2	2	6	75

AIRCRAFT AND SYSTEMS TRAINING COURSES

First Level Courses					
D141243-02	Aircraft Maintenance Officer	10	4	12	78
D141247-01	Aircraft Pneudraulics Systems Technician	12	3	12	82
D141249-01	Aircraft Maintenance Superintendent	10	4	12	85
D141250-01	Aerospace Ground Equipment Technician	12	3	10	88
D141251-01	Aircraft Technician	12	4	12	91
D141255-01	Engine Technician (Apprentice)	12	3	12	94
D141396-01	Aircraft Structural Maintenance Technician	12	4	12	96
D141257-01	Helicopter Crew Chief	12	5	10	98
D141282-01	Corrosion Control Technician	6	4	10	101
D142072-01	Armament/Munitions Systems Technician	12	3	10	103
A-37 Aircraft Advanced Courses					
D141264	A-37B Jet Aircraft Technician	6	4	10	106
D141387	J-85 Engine Technician	10	3	10	108
C-130 B/E/H Aircraft Advanced Courses					
D141259	C-130 B/E/H Aircraft Technician	8	3	8	110

MASL. ID	Title	Duration (Weeks)	Student		Page
			Min.	Max.	
D141260	C-130 B/E/H/T-56 Engine Technician	6	4	10	112
D141261	C-130 B/E/H Propeller Technician	5	4	10	114
Advanced Maintenance Courses					
D148202	F-5 E/F Aircraft Technician	8	4	10	116
D141242	T-53-L-13 Engine Technician	5	4	8	119
D141280	PT-6A Engine Technician	4	3	10	121
D141304	UH-1H Helicopter Technician	7	4	8	123
D141322	UH-1N Helicopter Technician	7	4	8	125
D141311-01	A/M32A-86D Diesel Generator (HOBART)	5	3	8	127

* NOTE: (*) Indicates changes. Effective immediately per AETC Instruction 36-2215, if a course changes more than 20 percent a new MASL number is required. In order to meet AETC standards a (-01) will be added to the end of the original MASL number to all courses revised more than 20 percent for in house purposes only versus getting a new MASL number. Please keep in mind the -01 is not part of the original MASL number when requesting a course quota through Air Force Security Assistance Training (AFSAT).

GENERAL INFORMATION

APPLICABLE DIRECTIVES AND MANUALS

DODM 5105.38, Security Assistance Management Manual (SAMM)
AFI 16-103, Managing the Defense English Language Program
AFCAT 36-2223, USAF Formal Schools
AFI 16-105, Joint Security Assistance Training (JSAT) (Inter-Service)
IAAFA OI 36-5, Student Conduct and Disciplinary Standards

COUNCIL ON OCCUPATIONAL EDUCATION

If any student has an issue with the academy's student grievance procedures they can contact the Council on Occupational Education (COE) at:

Council on Occupational Education
41 Perimeter Center, East, NE
Suite, 640
Atlanta, Georgia 30346
(770) 396-3898 or (800) 917-2081)

STUDENT SELECTION REQUIREMENTS AND PREREQUISITES

The United States SAOs (US Military Groups) and their host governments screen students selected by the host country to attend the academy. SAO training officers **MUST ENSURE EACH STUDENT MEETS ALL COURSE PREREQUISITES**. Deviations from the minimums established in this catalog must be approved on an individual basis by the IAAFA Commandant and are requested in advance in writing through AFSAT/TO, 2021 First Dr. West, Randolph AFB, TX 78150-4302.

The SAO training officer must:

- a. Obtain the findings of an official and current physical examination from a designated medical authority for all prospective students certifying the individual is free of infectious disease or other medical conditions, which would disqualify him/her from general military duty. The prospective trainee should receive all immunizations prescribed by the US Public Health Service as approved by the World Health Organization and must be free of active tuberculosis.
- b. Brief each selected student in accordance with AFI 16-105.
- c. Due to high Security brief the student that the academy is on a U.S. Military installation and the importance of abiding by the base rules and regulations.
- d. Administer the IAAFA aptitude tests and forward results/scores to 837 TRSS/SSR, 2431 Carswell Ave., Lackland AFB TX 78236-5609, no later than 2 weeks prior to class start date. Ensure that scores of prerequisite/entry exams administered in country are reflected in the students' Invitational Travel Order (ITO). Tests are available from 837 TRSS/CDOV. Test results are valid for 15 months from date taken.

- e. Accomplish security screening in accordance with AFI 16-105.
- f. Arrange transportation in accordance with AFI 16-105.
- g. Ensure student reads the student guide (Guia Estudiantil) prior to departure.
- h. Provide 837 TRSS/SSR with students' arrival information (rank, name, sex, arrival date and time) no later than 1 week prior to the anticipated arrival dates to plan billeting and transportation requirements.

NOTE: STUDENTS SHOULD ARRIVE IN SAN ANTONIO NO LATER THAN 1 OR 2 DAYS PRIOR TO THE CLASS START DATE, BUT NO EARLIER.

- h. The academy's 24-hour point of contact numbers are:

	From U.S.	From overseas
Toll free	1-800-577-5926	*010-1 (800) 577-5926
Commercial phone	(210) 671-4406	010-1 (210) 671-4406
DSN	473-4406	(312) 473-4406
Commercial Fax	(210) 671-4799	010-1 (210) 671-4799
DSN Fax	473-4799	(312) 473-4799

*Callers may dial the academy Toll Free line from overseas, but may still be assessed a calling charge by their in-country telephone service.

INFORMATIONAL PROGRAM (IP)

The IP is a DOD program designed to provide a balanced understanding of the US culture, society and way of life to all foreign military trainees attending courses in the US. The academy has a very active IP. Students will have the opportunity to participate in cultural and educational events and visits to several local and state government institutions. As part of the IP, IAAFA has an "Amistad Program." This program involves the sponsorship of students by base and local volunteer families and allows students to become familiar with US family and cultural values. Though it is a goal of the program, not all students may be able to obtain "sponsors."

Finally, as part of the DOD IP activities offered at IAAFA, the academy hosts a Cultural Night during which students perform skits, music, and dance routines typical of their countries. It is beneficial for students planning to participate to bring any music, costumes, and/or props necessary for their performances, as they are not readily available in San Antonio.

ACCOMPANIED STUDENTS

The academy highly discourages students from bringing their dependents to San Antonio. This creates an added burden for the student and the academy. All academy students live on base. Long academic days and study requirements leave little available time for family matters.

IAAFA cannot alter Training programs to meet the specific requirements of students with dependents. If the student still desires to bring a spouse/dependent, he/she should consider the many logistical problems they will encounter (i.e., ineligibility to use base facilities, very long distances and lack of transportation, dependent's inability to conduct daily business due to language differences, isolation/boredom, etc.)

BASE EXCHANGE (BX) PRIVILEGES

All students are authorized full privileges in the Base Exchange system.

GENERAL IAAFA CLOTHING REQUIREMENTS

	COURSE LENGTH		
Officer and Enlisted	12 Weeks	Less than 12 weeks: Graduate at end of class (see note 1)	Less than 12 weeks: Do not Graduate at end of class (note 1)
Light blue short sleeve shirt w/trousers or equivalent	Students must bring	Students must bring	Students must bring
Service dress (coat & tie) or equivalent	Students must bring	Students must bring	Students must bring
Mess (formal) dress (if not available, then most formal uniform)	Students must bring	Students must bring	Not Required
Battle Dress Utilities	Students must bring	Students must bring (See note 2)	Students must bring (See note 2)
Flight Suit	Not Required	Students must bring (See note 3)	Students must bring (See note 3)
Combat Boots	Students must bring	Students must bring. (See note 4 for exceptions)	Students must bring. (See note 4 for exceptions)
Athletic Attire	Provided by IAAFA (See note 5)	Provided by IAAFA (See note 5)	Provided by IAAFA (See note 5)

NOTES

1. End of class dates for Academic year 2005:

Class A – 18 Feb, Class B – 27 May, Class C – 2 September, Class D – 16 December

End of class dates for Academic year 2006:

Class A – 24 February, Class B – 26 May, Class C – 1 September, Class D – 8 December

2. The following items are issued to only those students attending the Ground Defense Course (MASL 173056), Special Reaction Team (MASL 173067), Security Forces Apprentice (MASL 173068):

Belt, Web, Blue	(1)	Shoes, Athletic	(1)
Buckle, Belt	(1)	Shoes, Boots	(1)
Cap, BDU	(1)	Shorts, Athletic	(2)
Nametags, Plastic	(1)	Socks, Wool, Black	(3)
Rank Insignia	(1)	Socks, Athletic	(3)
Shirt, Athletic	(2)	Trousers, BDU	(2)
Shirts, BDU	(2)	Undershirt, Cotton	(3)

3. Pilots attending Pilot Instrument Procedures Course (PIPC, MASL 121064) and Instructor PIPC (MASL121065) can bring BDUs if they do not have flight suits. All other students are required to bring BDUs, fatigues, or equivalent work uniforms.

4. Steel toe boots are provided only to students attending the following course MASLs: all other students must bring their own boots if required.

MASL 131119	MASL 131123	MASL 132080	MASL 133060	MASL 141242
MASL 141244	MASL 141247	MASL 141250	MASL 141251	MASL 141253
MASL 141254	MASL 141255	MASL 141257	MASL 141259	MASL 141260
MASL 141261	MASL 141264	MASL 141280	MASL 141282	MASL 141304
MASL 141311	MASL 141322	MASL 141387	MASL 141396	MASL 142072
MASL 148202	MASL 152055	MASL 173056	MASL 173067	MASL 173068

5. The following athletic attire will be issued according to class

	CLASS A	CLASS B	CLASS C	CLASS D
Athletic shoes	1 ea.	1 ea.	1 ea.	1 ea.
Athletic shirt	2 ea.	2 ea.	2 ea.	2 ea.
Athletic short	2 ea.	2 ea.	2 ea.	2 ea.
Sweat shirt	1 ea.	None	None	1 ea.
Sweat pants	1 ea.	None	None	1 ea.

CIVILIAN CLOTHING

Students may purchase civilian clothing at the local Base Exchange facilities. Temperatures in San Antonio fluctuate depending on the time of year. Light to medium weight clothing is appropriate year-round. A sweater or light jacket is also recommended for spring and autumn months since the temperature can drop from the mid-80s (27° C) to the mid-40s (4° C) in a matter of hours. Heavier clothing is recommended for the winter months though, again, the temperature may reach well above 60° F (16° C) during the day, low norms for winter range between 30° and 60° F (0° C and 16° C). Additionally, heavy rain may be expected during spring and fall months.

MEALS

Meals are provided for students in a base dining facility. All enlisted students that do not receive temporary living allowance (TLA) through IAAFA must pay for their meals. All officer students, regardless of funding status, pay for their meals. All other students sign a cashier's log for daily meals and charges, which are reimbursed through the respective FMS, IMET, INL, or 10-04 channels. Students in the GDS Course, SRT, and SF course who are paying for meals, will need to make a one time payment of approximately \$20-\$30 for SRT & SF courses and \$80-\$100 USD for the GDS course to cover the cost of Meals-Ready-To-Eat (MREs) during their field training phases. Due to the requirement in advance for MREs, this amount will be collected at the beginning of the class. Students must be prepared for the cash outlay shortly after arrival. This is in addition to the funds referenced in the following paragraph.

FUNDS

Officers and enlisted personnel under IMET sponsorship will receive a living allowance to cover meals and incidental expenses as per DOD 5105.38M, Chapter 10, *unless otherwise indicated by the ITOs*. SAO training officers must ensure all students know that their pay, allowances, and obligations to the US government are due prior to their departure. **IAW AFI 16-105, International Military Students (IMS) should have in their possession upon entry into the US sufficient funds to cover expenses for a minimum of 30 days. First payment after arrival may take up to 3-weeks (holidays not included).**

BAGGAGE

Students are authorized a baggage allowance per DOD 5105.38M, Chapter 10, when travel is paid by IMET. Baggage must accompany the student. For portions of the travel funded by the host country, the baggage allowance is determined by the host country or current airline limits. ***IAAFA WILL NOT BE RESPONSIBLE FOR EXCESS BAGGAGE. In addition, IAAFA cannot store or mail any excess baggage left behind due to overweight violations.***

FIREARMS POLICY

No students will be permitted to import firearms into the US while on invitational travel orders from the USAF.

SMOKING POLICY

All work centers, billeting/lodging rooms and most recreational facilities at Lackland AFB are smoke-free. Smoking is allowed in designated areas only.

MAIL

Student mail should be addressed as follows:

**Rank/Name of Student
PCS #2/IAAFA/Country
2220 Andrews Ave, Unit 362800
Lackland AFB TX 78236-3628**

LEAVE AND ABSENCE

Students desiring to take leave or drive back to their home countries upon completion of training must have authorization included in their ITOs.

MEDICAL CARE

Students will receive medical care IAW AFI 16-105, reimbursable through respective IMET, FMS, INL, or 10-04 channels. Eyeglasses are not provided. **IMPORTANT:** Please refer to “General” section, Student Selection Requirements and Prerequisites, paragraph “a”, concerning medical screening of students prior to attendance at IAAFA.

DENTAL CARE

Students will only receive **EMERGENCY treatment** dealing with extraction and the relief of pain in accordance with AFI 16-105.

DRIVER’S LICENSE

Students planning to purchase, rent or drive a vehicle while at the academy must be at least 18 years of age and are required to possess either:

- An International Driver’s Permit or
- A valid drivers license issued in their country of origin which is recognized in the US.

The period of time for a student to use a foreign driver’s license in the US is dependent on the country of origin. The only licenses approved as valid for operating a motor vehicle in the US are as follows:

COUNTRY	TIME VALID FROM ARRIVAL IN US
Argentina	12 months
Belize	90 days only
Colombia	12 months
Costa Rica	30 days
Dominican Republic	12 months
Ecuador	90 days only
El Salvador	12 months
Mexico	12 months
Nicaragua	30 days only
Panama	12 months
Peru	90 days only
Guatemala	12 months
Honduras	12 months
Uruguay	90 days only

Students from countries not listed above must acquire an International Driving Permit. Car rental companies will not insure or rent vehicles to foreign nationals who do not possess one of the aforementioned licenses or permits.

Liability insurance is mandatory to operate a motor vehicle in the State of Texas and on military bases. Students planning to borrow vehicles must ensure the vehicle is insured for liability prior to driving it. Those who wish to rent or borrow a car must purchase liability insurance to meet legal requirements.

PHYSICAL FITNESS TRAINING (PT)

The Inter-American Air Forces Academy promotes physical fitness training to support the Air Force mission. The goal of the Fitness program is to motivate all students to participate in a physical conditioning program that emphasizes fitness. **Physical fitness training is mandatory for all students.**

AWARDS

(Note: To be eligible for the following class awards, students must attend/complete a 5-week course or longer.)

Commandant's Award. Presented to one officer and one enlisted student for overall academic achievement, leadership, military bearing and behavior, as well as individual contributions to the academy and sports.

Academic Achievement Award. Presented to one officer and one enlisted student who maintains the highest overall academic average among all eligible attendees.

Sports Awards. Team and individual (officer and enlisted) awards are presented on Field Day to members of winning teams participating in the academy's organized sports program.

Outstanding Athlete Award. Presented to the best all-around athlete, officer and enlisted, on the basis of ability, sportsmanship, and participation in the academy's organized sports program.

Diploma Recognition. The Distinguished Graduate Program – The Distinguished Graduate (98% grade point average or higher) program will recognize outstanding achievement in all graduating courses throughout the year. The Distinguished Graduate Program may recognize up to, but not exceed 10 percent of a graduating course. Each selection based on the whole-person concept rather than on academics or performance skills alone. All others not receiving the Distinguished Graduate award who score 95%-100% overall will graduate as Honor Graduates.

COURSES

BACKGROUND

Courses offered are based on historical needs (i.e., courses are kept from year to year), US strategic objectives as described in the US Southern Command Theater Engagement Plan, and customer country requirements. Customer countries can request new courses directly to the IAAFA by two means: as honorary directors of the academy, air forces commanders can contact the academy directly, and also through the System of Cooperation Among the American Air Forces' (SICOFAA) Human Resources, Education and Training Committee (CORHEE). Final decision on development and implementation of new courses occurs during the IAAFA Curriculum Advisory Board.

HUMAN RIGHTS TRAINING

All students receive Human Rights training during their attendance at IAAFA.

COURSE DESIGN

Training at the IAAFA is conducted in Spanish.

- a. **First Level Courses.** Courses are designed for entry-level training in the respective career field and are designed to complement in-country training programs. They cover the fundamental skills and knowledge to enable the student to perform on the job under the supervision of an experienced individual. Graduates are semi-skilled and can progress to the fully-skilled level by undergoing on-the-job training.
- b. **Advanced Courses.** These courses are designed to train individuals in specific systems primarily at the specialist or supervisor level.

NOTE: Students scheduled to attend these courses must have completed, as a minimum, a basic course in the related field or have at least two years of practical experience in the specialty in addition to meeting all other prerequisites.

COURSE NUMBERS

DOD Military Articles and Services List (MASL) numbers are required in all communications with the IAAFA and the AFSAT. This is the primary course identifier.

GRADUATION REQUIREMENTS

Students achieving a cumulative grade of 70% or above will have completed their respective courses successfully and will receive a diploma at a graduation ceremony. Those who do not achieve the minimum of 70% may be returned to their country with a letter of attendance and a letter explaining the failure with recommendations for additional training. An exception to the above rule applies to the Pilot Instrument Flight Procedures (MASL 121064) and the Instructor Pilot Instrument Flight Procedures (MASL 121065) where students must achieve a cumulative grade of 80% or higher to complete these courses. Students must attend the Graduation Banquet to receive a diploma.

PROFESSIONAL DEVELOPMENT COURSES

SQUADRON OFFICER COURSE*7 WEEKS****MASL D171032****STUDENT LOAD: MIN: 8 MAX: 12****COURSE OBJECTIVE**

This course is modeled after the program taught at the USAF Squadron Officer's School (SOS), which prepares USAF company grade officers for increased leadership responsibilities. The course is designed to develop dynamic Airmen ready to lead air and space power in an expeditionary warfighting environment. Educated students will value their unique role as air force officers by applying air and space leadership to effectively execute military missions, and valuing the warrior-leader ethos and its impact on air and space power development. The course improves the students' leadership and management skills, using lessons on leadership, military ethics, air force values, and human rights in addition to developing their knowledge of the use of airpower, including basic theories of warfare and the increasing role of aerospace and information systems in the joint environment. Students in this course receive the same instruction taught to all captains in the United States Air Force that attend SOS in-residence.

COURSE DESCRIPTION**This Course is not divided into Blocks**

The Squadron Officer Course (SOC) introduces the student to ideas on how an officer should view his/her profession. Students are taught lessons regarding the study of Air Force and Joint doctrine and history. The lessons on officer-ship emphasize the concept of how all officers, regardless of nationality, share the same basic ideals. The course includes studies of United States Air Force (USAF) core values. Lectures and seminars with guest speakers are used to further develop the concepts of leadership, senior officer perspectives, the role of women in the Armed Forces, human rights, military ethics, Law of Armed Conflict and the Uniform Code of Military Justice. Leadership exercises in this course are designed to help students manage their resources. Students investigate the skills necessary to lead, supervise, and communicate with their subordinates, peers, and superiors. Focus is on team building, applying the leadership principles, and developing basic presentation skills. Also included are lessons in quality principals such as techniques for group problem solving, process action teams and methods for continuous improvement that can be realistically applied to any work environment. The course includes a basic primer on the principles of war found in US basic doctrine and the history of air power, from the US perspective, beginning in World War I to lessons learned in Operation IRAQI FREEDOM. The course includes in-depth lessons on the keys for US military success in future conflicts: Joint Operations, Information Operations and Space Systems, and concepts pertinent to the Global War on Terror. In addition, students apply new concepts and principles of leadership during field trips to the Leadership Reaction Course (LRC) located at Lackland AFB. These challenges help the students with leadership, communication skills, and teamwork in a more realistic environment. Prior to the

exercises, the students will receive lessons in Operational Risk Management and apply them to the LRC and Confidence Courses.

PREREQUISITES

1. Eligibility requirements: Junior officers in the grade of captain or equivalent. Graduates of Squadron Officer School (in-residence), MASL D171003, are not eligible to attend.

2. Physical/Medical requirements:

a. Vision: Normal vision

b. Hearing/Speech: Normal hearing ability. Due to a heavy focus on oral presentations, students will require a clear (no stutter or stammer) speaking voice with no speech or hearing impediments.

c. Other: Active participation in rigorous physical training and field leadership program is required to meet course objectives. Must meet minimum physical requirements established by individual country's directives.

3. IAAFA Entrance examinations:

a. General aptitude: Minimum score of 30.

b. Mechanical aptitude: N/A

c. Mathematics aptitude: N/A

d. Electronics aptitude: N/A

4. Uniform/Equipment: In addition to the uniform requirements listed in the General Clothing Requirements on page 4, students are required to bring one pair of Battle Dress Uniform (BDU) or equivalent for use in the leadership exercises mentioned above. Students are required to make a country presentation, therefore, they are highly encouraged to bring support material (i.e. transparencies, maps, history, tourism, current events, etc.)

Summary of Changes: This course was previously referred to as Company Grade Officer Professional Development. Lessons on the Middle East, Global War on Terror and Flickerball were added to the course since the last catalog was published.

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NONCOMMISSIONED OFFICER PROFESSIONAL DEVELOPMENT**7 WEEKS****MASL D171033****STUDENT LOAD: MIN: 8 MAX: 12****COURSE OBJECTIVE**

This course is modeled after the USAF Noncommissioned Officers Academy (NCOA) which prepares NCOs for more advanced leadership and management responsibilities. It is specifically designed for those assuming senior NCO leadership positions (E-5 through E-9). The course of study focuses on developing the student's knowledge of military principles and the relationships between national interests and their roles as military members. Instruction is also directed at improving their skills as leaders and managers. Students learn time and stress management, concepts of human behavior, as well as implementing quality in the workplace. The class is designed to take students to a comprehension level of learning with some exposure to application.

COURSE DESCRIPTION**BLOCK I – TEAMWORK**

In the general areas, students explore subjects such as time and stress management, physical fitness and wellness. The first stage of this course begins with Communication Theory to include impromptu oral presentations. In addition, Total Quality Management Principles are discussed and related to military environment. This area encompasses group dynamics, team leader skills, and quality tools and techniques. Lectures, seminars, and group interaction are methods employed to explore subjects listed not only in this block, but also in others.

BLOCK II – LEADERSHIP AND PROFESSION OF ARMS

Students are exposed to new concepts of leadership/followership theories and their practical application in a quality culture. Leadership and decision-making scenarios will challenge the students and maximize the intensity of learning. A practical exercise will test the student's ability to apply leadership principles in a simulated contingency situation. Areas covered in this block include Code of Conduct, written exercises, team leader skills, problem solving, causes of human behavior, and modification of human behavior. In addition further areas of communication are explored as students present a 5 to 10 minute country specific briefing on the history of Latin America.

BLOCK III – NCO VALUES AND MANAGEMENT TOOLS

The last block of the course focuses on personnel evaluations, customs and courtesies, air force missions, national security, and the NCO in a leadership role. The objective of this area is focused

on practical applications of counseling skills, and team dynamics through exercises and the leadership reaction course.

PREREQUISITES

1. * Eligibility requirements: Noncommissioned Officers in the grades equivalent to USAF Staff Sergeant (E-5) through Chief Master Sergeant (E-9). Graduates of USAF NCO Professional Development Courses are not eligible to attend. Civilian equivalents may attend with prior coordination.

2. Physical/Medical requirements:

a. Vision: N/A

b. Hearing/Speech: Normal hearing ability. Due to a heavy focus on oral presentations, students will require a clear (no stutter or stammer) speaking voice with no speech or hearing impediments.

c. Other: Active participation in rigorous physical training and field leadership program is required to meet course objectives. Students must meet minimum physical requirements established by individual country's directives.

3. IAAFA Entrance examinations:

a. General aptitude: Minimum score of 28

b. Mechanical aptitude: N/A

c. Mathematics aptitude: N/A

d. Electronics aptitude: N/A

4. Uniform/Equipment: In addition to the uniform requirements listed in the General Clothing Requirements on page 4, students in this course are required to bring the following: one set of Battle Dress Uniform (BDU) or equivalent for participation in field leadership exercises (refer to note 4 on page 5). Students are required to make two country presentations, it is highly encouraged to bring support material i.e. transparencies, maps, history, tourism, current events, etc.

*** Summary of Changes:** N/A

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OPERATIONS AND SUPPORT TRAINING COURSES

PILOT INSTRUMENT PROCEDURES**11 WEEKS****MASL D121064****STUDENT LOAD: MIN: 6 MAX: 12****COURSE OBJECTIVE**

This course helps prepare pilots for flying missions under Instrument meteorological conditions (IMC) and in accordance with Instrument Flight Rules (IFR). It will teach both Federal Aviation Administration (FAA) and International Civil Aviation Organization (ICAO) rules and procedures. Students will learn the use of various charts, navigational aids, and instrument flight procedures, to include basic fundamentals and planning of international flight plans. There is no actual flight training involved, and application is taught via flight simulators. Graduates of this course are still required to apply these procedures in their respective weapon systems with an experienced instructor or evaluator in order to fully qualify for instrument flight operations.

COURSE DESCRIPTION**BLOCK I - FUNDAMENTALS OF INSTRUMENT FLIGHT**

This unit is designed to improve basic instrument knowledge through the introduction of fundamental instrument procedures and concepts. Upon completion of this unit, students will comprehend the fundamental procedures for implementing the 60-1 rule, control and performance concepts, and instrument cross-check procedures. In addition, this unit teaches students procedures on the use of Navigational Aides (NAVAIDS), aircraft instrumentation, radial/arc intercepts, fix-to-fix navigation, and holding pattern procedures.

BLOCK II - FLIGHT PLANNING AND SPECIAL TOPICS

The purpose of this unit is to enhance the student's instrument flight planning skills. The student will receive instruction on instrument approach procedures, the use of Jeppesen and Department of Defense charts, airspace and weather considerations, departures and arrivals, and spatial disorientation recognition. ICAO procedures are covered and compared with FAA instrument procedures. Additionally, a thorough revision of procedures used to calculate flight plan data and the submission of an international flight plan will take place during this block.

BLOCK III - INSTRUMENT APPROACH PROCEDURES

This unit is designed to develop knowledge of procedures and techniques to fly precision and non-precision instrument approach procedures. Both high altitude and low altitude approach procedures are discussed. Additionally, techniques and procedures for missed approach and landing out of an approach receive in-depth analysis. Topics on autopilot approaches, safety of

flight, Crew Resource Management, Global Positioning System operations, airspace and communications is covered to include a tour of the San Antonio or Kelly Field air traffic control facilities and tower. Terminal Instrument Procedures criteria is addressed to give the students basic understanding of instrument procedures and limitations.

BLOCK IV - INSTRUMENT SIMULATOR

Fundamentals and performance of basic instrument skills is the objective of this block. The student will fly 21 missions in either a twin prop or twin jet simulator, such as, a Frasca 242 (twin prop), AST Hawk (twin prop), T40 (twin jet) or 737 simulator. Students will receive instruction in the following: basic instrument maneuvers, confidence maneuvers, radial/arc intercepts, fix-to-fix navigation, and holding pattern procedures. Students will additionally receive several hours of self-paced instruction on the NT361 computer based flight trainer (CBFT) where they will practice basic procedures individually or with an instructor. Students will practice all maneuvers and instrument approach procedures, with emphasis on incorporating fundamentals, basic skills, and instrument procedures in several real-time missions. On the last simulator sortie of each block the student will receive a progress check of all assigned maneuvers. A comprehensive simulator checkride is administered at the end of this unit.

PREREQUISITES

1. Eligibility requirements : The student must have flown, and be a current and qualified pilot in his/her primary aircraft within the 6 months preceding attendance and have a minimum of 200 hours of fixed or rotary wing experience after their formal flying course. **The candidate should have a minimum of 20 hours of instrument flight time.**

2. Physical/Medical requirements:

- a. Vision:** That which is required to maintain flight status.
- b. Hearing/Speech:** No hearing or speech impediments or aides.

3. IAAFA Entrance examinations:

- a. General aptitude:** N/A
- b. Mechanical aptitude:** N/A
- c. Mathematics aptitude:** Minimum score of 25
- d. Electronics aptitude:** N/A
- e. Pilot aptitude exam:** N/A.

4. **Uniform/Equipment:** In addition to the uniform requirements listed in the General Clothing Requirements on page 4, students are encouraged to bring examples of home field instrument approach charts and maps to share with the class.

* **Summary of Changes:** N/A

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INSTRUCTOR PILOT INSTRUMENT PROCEDURES**11 WEEKS****MASL D121065****STUDENT LOAD: MIN: 6 * MAX: 12****COURSE OBJECTIVE**

This course is designed to help prepare pilots with experience in instrument flying procedures for duties as instrument flight instructors. This course will reinforce the concepts, which are introduced in the Pilot Instrument Procedures Course (MASL D121064) and also familiarize students with instrument flight procedures and rules on instructional procedures and techniques necessary to perform instructional duties. Instruction covers both Federal Aviation Administration (FAA) and International Civil Aviation Organization (ICAO) rules and procedures. There is no actual flight training involved and application is taught via flight simulators. Graduates of this course are still required to apply these procedures in their respective weapon systems with an experienced instructor or evaluator in order to fully qualify for instrument flight operations.

COURSE DESCRIPTION**BLOCK I - FUNDAMENTALS OF INSTRUCTION**

This unit is designed to develop instructional techniques related to the control and performance of aircraft. Topics in this unit include instructional techniques, the learning process, and performance analysis. In addition, grading scenarios and grading practices and standards are discussed. The student instructors also gain experience as instructors.

BLOCK II - FUNDAMENTALS OF INSTRUMENT FLIGHT

This unit is a review of basic instrument procedures such as the 60-1 rule, control and performance concepts, and instrument cross-check procedures. Additionally this unit reviews procedures on the use of navigational aides (NAVAIDS), and aircraft instrumentation.

BLOCK III – FLIGHT PLANNING AND SPECIAL TOPICS

This unit is designed to enhance the student's skills through planning instrument flight. Also, the unit introduces the student to several important "flight safety" related topics. The focus of this unit is wind shear, spatial disorientation training, and flight mishap prevention. This unit is designed to enhance the student's skills through instrument flight planning. Global Positioning System (GPS), airspace and crew resource management are also taught in-depth. ICAO procedures are included with FAA rules to differentiate and provide the student with a solid instrument background and knowledge. Terminal instrument procedures and criterias are covered more thoroughly to give instructor students a solid foundation in instrument fundamentals.

BLOCK IV - INSTRUMENT APPROACHES PROCEDURES

This unit begins with a deep analysis of aeronautical charts using Department of Defense and Jeppesen formats. Flight planning procedures and techniques are reviewed as are instructional techniques for flying precision and non-precision approaches. Also included are the factors that should be taken into consideration during the transition to landing and missed approaches. ICAO procedures are covered for the purpose of international understanding and familiarization for their area of operations solidifying their skills as prospective instructors.

BLOCK V - INSTRUMENT SIMULATOR

In this unit flight simulators such as the Frasca 242 (twin prop), AST Hawk (twin prop) 737 or T40 (twin jet) are used to carry out instrument maneuvers previously studied in the classroom. A total of 63 simulator hours will be flown, half as an instructor and half as a simulated student. Additionally, 60 hours of self-paced NT361 flight training device instruction are included. The application of instructional techniques required for each maneuver are explored. The simulator profiles include: basic and advanced instrument maneuvers, precision and non-precision instrument approaches, and transition to landing, and missed approaches. The primary objective of this unit is the successful application of the knowledge acquired during the classroom blocks of instruction.

PREREQUISITES**1. Eligibility requirements:**

- a. The student must have flown, and be a current and qualified pilot in his/her primary aircraft within the 6 months preceding attendance and have a minimum of 300 hours as an aircraft commander/pilot in command. **In addition, the candidate must have a minimum of 20 hours (20 hours desired) of instrument flight time. It is also desired for the candidate to have a completed instructor qualification prior to attendance.**
- b. Students should have completed the IAAFA Pilot Instrument Flight Procedures (PIPC) course or equivalent training. Where equivalent training is claimed and the course is not part of an IAAFA approved equivalency list, the academy will make the equivalency determination. Submit proposed equivalent course description a minimum of two weeks prior to class date to allow for evaluation and processing in accordance with section 1 of this catalog.

2. Physical/Medical requirements:

- a. **Vision:** That which is required to maintain flight status.
- b. **Hearing/Speech:** No hearing or speech impediments or aides.

3. IAAFA Entrance examinations:

- a. **General aptitude:** N/A
- b. **Mechanical aptitude:** N/A
- c. **Mathematics aptitude:** Minimum score of 27
- d. **Electronics aptitude:** N/A
- e. **Pilot aptitude exam:** Minimum score of 30

4. Uniform/Equipment: In addition to the uniform requirements listed in the General Clothing Requirements on page 4, students are encouraged to bring examples of home field instrument approach charts and maps to share with the class.

*** Summary of Changes:** N/A

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SEARCH AND RESCUE (SAR)**5 WEEKS****MASL D121066****STUDENT LOAD: MIN: 6 MAX: 12****COURSE OBJECTIVE**

This course is an introduction to Search and Rescue (SAR) procedures and Rescue Coordination Center (RCC) operations and is designed for enlisted or officers who perform in the capacity of SAR coordination and operations or related duties. The course will give the student a working knowledge in concepts on how to organize and plan SAR center operations and mission planning. Class sessions focus heavily on scenario executions which give the student extensive practice in a simulated SAR environment.

COURSE DESCRIPTION**BLOCK I - THE SAR SYSTEM**

Course orientation, course pre-test/critique, SAR system, organization and facilities, RCC organization (with inspection of an actual RCC operation), communications and emergency signals, RCC messages, charts, alert and initial action phase, survival, and weather hazards.

BLOCK II - SAR PLANNING

This block prepares the student for the factors involved in a SAR incident. Includes the facilities that are available to the search planner and the mathematical process involved in calculating a marine SAR operation. It also lays the foundation in planning and preparing for the next block of SAR applications.

BLOCK III - SAR APPLICATIONS

This block is an application of the SAR studies and theory learned in the first two blocks. It also prepares the students for SAR planning and operations using the new technology of Geographic Display Operations Computers (GDOC) or C2PC program modules. Extensive exercises are run to give the students many scenarios and practice in running and controlling a SAR operation.

PREREQUISITES

1. Eligibility requirements: Open to all officers, enlisted, and/or civilians that perform or plan to perform SAR related duties.

2. Physical/Medical requirements:

- a. Vision:** Normal Vision
- b. Hearing/Speech:** No hearing or speech impediments or aides.

3. IAAFA Entrance examinations:

- a. General aptitude:** N/A
- b. Mechanical aptitude:** N/A
- c. Mathematics aptitude:** Minimum score of 27
- d. Electronics aptitude:** N/A
- e. Pilot aptitude exam:** N/A

4. Uniform/Equipment: None, other than those mentioned in the General Clothing Requirements on page 4.

*** Summary of Changes:** Course maximum changed from 18 to 12

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FOREIGN MILITARY SALES (FMS)***6 WEEKS****MASL D151023****STUDENT LOAD: MIN: 6 MAX: 16****COURSE OBJECTIVE**

This course is for all personnel, regardless of rank, involved with the Foreign Military Sales (FMS) process. It includes the process of setting up an FMS case, requisitioning materiel by FMS customers from US depots and use of the Supply Tracking and Reparable Returns (STARR/PC2) system. The course offers in-depth knowledge and practical experience in researching data research related to positive identification and requisition of supply assets. Students gain a complete understanding of supply cataloging publications and the FMS process, as well as ample hands-on experience using the STARR/PC2 system to input, track, and manage FMS requisitions. This course is ideal for personnel to gain comprehensive understanding of the Foreign Military Sales process.

COURSE DESCRIPTION**BLOCK I - SUPPLY PUBLICATIONS**

This block of instruction provides an introduction to supply publications used to research data prior to requisitioning assets. This area introduces five main sets of publications: MCRD, H Series, MD/I&S, Characteristics, and Technical Orders. Students learn to cross-reference part numbers to national stock numbers and vice versa using the Master Cross Reference Data (MCRD). Students also learn to search information pertaining to commercial/vendor addresses and codes related to commercial entities through the use of the H- series catalog. Students learn to determine the codes and information pertaining to pricing, reparability, and sources of supply, as well as identifying relationships between master, interchangeable, and substitute items. The Characteristics Data publication provides details of all assets and their applicable military specifications as provided by the US Federal Logistics Information System and NATO countries. Lastly, students learn about technical orders with special emphasis on the illustration parts breakdown to positively identify parts and provide better support to maintenance. The student becomes proficient in researching data by fully understanding the purpose of the publications and using them to complete a series of exercises.

BLOCK II - FOREIGN MILITARY SALES (FMS)

This block begins with a broad view of the US Security Assistance program and the US goals under the program. The six major Security Assistance program components and related components that include the Defense Reutilization and Marketing System (DRMS) and the Worldwide Warehouse Redistribution System (WWRS) are covered in detail. Other topics include the types of materiel available for sale, letters of request (LOR), letters of offer and

acceptance (LOA), types of cases, the purpose and concept of the Cooperative Logistics Supply Support Agreement (CLSSA), case codes, routing information and contractual documents related to FMS cases. The purpose of the Report of Discrepancy, the different types of discrepancies, how to complete the discrepancy form (SF 364) and the different codes used are outlined in detail. Another area presents forms and formats of the Military Standard Requisitioning and Issue Procedures (MILSTRIP) and the Uniform Material Movement and Issue Priority System (UMMIPS), including step-by-step procedures to prepare each form, document, and transaction. Students have the opportunity to prepare all documentation, generate an FMS transaction and consequently the requisition material from US depots.

BLOCK III - SUPPLY TRACKING AND REPARABLE RETURNS PROGRAM

This block illustrates the purpose of the STARR/PC2 program and the information required to establish a requisition. Students learn the flow of information from the user's computer terminal to the International Logistics Control Office (ILCO), to the source of supply. Students also learn how to navigate the STARR/PC2 program and how to input, inquire, and interpret codes when processing the different supply transactions. Students have the opportunity to practice the five main menu options. Students perform numerous activities during class to become proficient in setting up, customizing the system, preparing, transmitting, and receiving data. Upon completion of this block students have the tools to manage all data pertinent to FMS requisitions and cases.

PREREQUISITES

1. Eligibility requirements: Basic computer and supply related experience facilitates comprehension but it is not a requirement to succeed in this course. It is Highly recommended for students who attended IAAFA supply courses prior to 2001, due to the upgrade from STARR-PC to STARR/PC2 in October 2000.

2. Physical/Medical requirements:

- a. **Vision:** N/A
- b. **Hearing/Speech:** N/A
- c. **Other:** N/A

3. IAAFA Entrance examination:

- a. **General aptitude:** Minimum score of 21.
- b. **Mechanical aptitude:** N/A
- c. **Mathematics aptitude:** N/A
- d. **Electronics aptitude:** N/A

4. Uniform/Equipment: None, other than those mentioned in the General Clothing Requirements on page 4.

*** Summary of Changes:** N/A

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INTERNATIONAL LOGISTICS**9 WEEKS****MASL D152054****STUDENT LOAD: MIN: 6 MAX: 16****COURSE OBJECTIVE**

This course is for personnel assigned to or projected for assignment to supply/logistics leadership positions and who already have some supply knowledge or experience. Officers in the grades of second lieutenant through major (O-1 to O-4), enlisted in the grades of master sergeant through chief master sergeant (E-7 to E-9), and civilians of equivalent grades qualify to attend this course. This course prepares students for leadership positions in the supply/logistics field by introducing them to the latest principles of logistics integration and resources management including the Foreign Military Sales (FMS) program. Additionally, the course presents and reinforces principles of management, leadership, funds management, management of reparable assets, and fuels management.

COURSE DESCRIPTION**BLOCK I - INTRODUCTION TO MANAGEMENT**

This block of instruction provides an in-depth look at concepts and tools used at the management level. It focuses on the traditional as well as contemporary functions of management. Topics include the concept of operations management, equipment management, budget administration, human resources and personnel management. One lesson focuses entirely on the subject of leadership and another on the Continuous Improvement Process (CIP). Another lesson is dedicated to Total Quality Management (TQM) principles, its evolution and key concepts, to include its importance to the civilian industry as well as the military field. This block of instruction will empower logisticians to improve management of resources, their logistics processes, customer support and the weapons systems they support.

BLOCK II - LOGISTICS ORGANIZATIONS

This block provides the principles and concepts for successful logistics management and general information on several support organizations that contribute to the overall logistics support of an operating base. Emphasis is placed on the main logistics support organizations; supply, maintenance, transportation, and contracting. Students learn about the different functions of these organizations and how they integrate to form an effective logistics support system. The US DoD and AF logistics systems are analyzed to understand their intricateness and effectiveness during peace time operations and contingencies. The functions of a logistics plans organization, specific personnel responsibilities, mobility training, and the base level deployment process are

covered in detail. Scenarios are used to reinforce the mobility concepts and the how to establish and maintain effective logistical support at forward operating locations.

BLOCK III - SUPPLY PUBLICATIONS

This block provides an introduction to supply publications used to research data prior to requisitioning assets. This area presents five main sets of publications: MCRD, H Series, MD/I&S, Characteristics, and Technical Orders. Students learn to cross-reference part numbers to national stock numbers and vice versa using the Master Cross Reference Data. Students also search information pertaining to commercial/vendor addresses and codes related to commercial entities through the use of the H Series catalog. Students learn how to interpret codes and locate data related to a specific distributor, manufacturer or vendor. Additionally, students learn to determine the codes and information pertaining to pricing, reparability, and sources of supply, as well as identifying relationships between master, interchangeable and substitute items. The Characteristics Data publication provides details about all assets as well as applicable military specifications provided by the US Federal Logistics Information System and NATO countries. Lastly, students learn about technical orders with special emphasis on the illustration parts breakdown to positively identify parts and provide better support for the customer. Students become 100 percent proficient in researching data by completing a series of exercises related to data found in each publication and fully understanding its purpose and use.

BLOCK IV - MATERIAL MANAGEMENT

This block covers the organization and management of a supply account. It provides an extensive look at material management and property accounting. It also includes important aspects about the processes for determining requirements, establishing appropriate stock levels to support the base level customer, and focuses on aspects of inventory management and the repair cycle concept in extensive detail. Students learn to identify and manage repair cycle items, the repair cycle time, asset control, repair cycle asset flow, and the turnaround process. Management of the awaiting parts and supply point programs are emphasized as a means to provide effective customer support to operational units.

BLOCK V - FUELS MANAGEMENT

This block provides students a solid foundation for the effective operation of a fuels support organization and management of petroleum, oils, and lubricants. It begins with an overview of a typical fuels support organization. This block establishes the functions and responsibilities as well as the relationship between the fuels management team, accountability, quality control, operations, and the fuels control center. The second lesson of this block covers all aspects of fuels distribution to include fuels support vehicles, carts and different types of hydrants. Lessons three and four of the block cover the storage, distribution and inventory of fuels products. Another area discusses the storage of cryogenics and liquid oxygen. Lastly, this block covers all safety related issues in detail.

BLOCK VI - FOREIGN MILITARY SALES

This block begins with a broad view of the US Security Assistance Program and the US goals under the program. The six major Security Assistance program components and related components that include the Defense Reutilization and Marketing System (DRMS) and the Worldwide Warehouse Redistribution System (WWRS) are covered in detail. Other topics include the types of materiel available for sale, letters of request (LOR), letters of offer and acceptance (LOA), types of cases, the purpose and concept of the Cooperative Logistics Supply Support Agreement (CLSSA), case codes, routing information and contractual documents related to FMS cases. The purpose of the Report of Discrepancy, the different types of discrepancies, how to complete the discrepancy form (SF 364) and the different codes used are outlined in detail. Another area presents forms and formats of the Military Standard Requisitioning and Issue Procedures (MILSTRIP) and the Uniform Material Movement and Issue Priority System (UMMIPS), including step-by-step procedures to prepare each form, document, and transaction. Students have the opportunity to prepare all documentations that generate an FMS transaction and consequently the requisitioning of material from US depots.

BLOCK VII - STARR/PC2

This block outlines the purpose of the STARR/PC2 system and all aspects regarding the use of the program. It covers in detail the management of the STARR/PC2 system and its use in managing the purchase of FMS materiel as well as the management of repairable assets. Students learn how to navigate the STARR/PC2 program, input data, inquire, and interpret codes when processing supply transactions and the flow of information from the user's computer terminal to the US source of supply. Students examine all aspects of acquisition management, including the establishment and transmission of all types of requisitions to the different sources of supply. This block also includes training on follow up, status, shipment, modifications, and cancellation of requisitions. Another area covers the financial management of FMS and FMS cases. The instructor demonstrates all options of the system and students have the opportunity to practice these options and become proficient.

PREREQUISITES

- 1. Eligibility requirements:** Officers in the grades of O-1 to O-4, enlisted personnel in the grade of E-7 through E-9, and civilian equivalent.
- 2. Physical/Medical requirements:**
 - a. Vision:** Normal vision with or without glasses
 - b. Hearing/Speech:** Normal hearing/normal speech
 - c. Other:** N/A
- 3. IAAFA Entrance examinations:** N/A
 - a. General aptitude:** Minimum score of 21.

b. Mechanical aptitude: N/A

c. Mathematics aptitude: N/A

d. Electronics aptitude: N/A

4. Uniform/Equipment: None, other than those mentioned in the General Clothing Requirements on page 4.

*** Summary of Changes:** N/A

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SUPPLY MANAGEMENT**9 WEEKS****MASL D152055****STUDENT LOAD: MIN: 6 MAX: 16****COURSE OBJECTIVE**

This course is for airmen or NCOs, newly commissioned officers, or civilian personnel working in base supply or supply related functions. This course prepares supply specialists to assume entry-level supply responsibilities and perform related duties in inventory management and warehousing concepts. The students develop the necessary skills to establish and manage a supply activity, manage the inventory, and manage a warehouse. Students receive training on how to identify, inventory, account, and manage property. They also learn how to set up a warehouse and how to use material handling equipment to include training on forklift safety and how to operate it.

COURSE DESCRIPTION**BLOCK I – SUPPLY ORGANIZATION**

Students begin this course with an in-depth view of various logistics systems. The focus is on the supply organization and functions of a base level supply unit and its interface with depot level supply. Students learn about the supply/logistics career field, duties, responsibilities, and how day-to-day functions directly affects the mission of supported operational units. Students also learn how supply fits into a complete logistic structure and how various elements of a logistics system are interdependent. The presentation of the concept of “customer support” relates to a base level supply unit.

BLOCK II – SUPPLY PUBLICATIONS

This block provides students with detailed training on how to use supply catalogs and cataloging data. It begins with a solid foundation of the logistics cataloging system and a thorough examination of the national stock number. An introduction to computers provides basic terminology, system and hardware use. This block provides the use of supply catalogs and technical orders with emphasis on the Illustrated Parts Breakdown. It also includes techniques on how to use the CD ROM based catalogs to determine an item’s part number, cross reference to a national stock number, determining interchangeable or substitute assets, and determining administrative data such as the price of the item and availability at the depot. Students receive hands-on training on the use of the H-series catalog, Master Cross Reference Data, Management Data and Interchangeable and Substitute, Characteristics and Technical Orders.

BLOCK III - INVENTORY MANAGEMENT

This block provides an introduction to stock level and economic order quantity principles. It also includes stock requirements computation, requisition and validation concepts. One of the areas presents and analyzes the USAF model to illustrate the accountability of in-stock assets and provide all aspects regarding the inventory of material. The entire process covers all steps from beginning to end and includes how to research and resolve out-of-balance conditions, inventory adjustments and determining the accuracy of the inventory maintained in the warehouse. Another area covers the automated and manual inventory procedures where students perform an inventory of a training warehouse. In the repair cycle process, students learn to identify reparable assets, determine the repair cycle time, asset control, repair cycle asset flow and the turnaround process. The last lesson of this block focuses on basic accounting procedures fundamental to the operation of a supply organization. The emphasis, placed on principles, provides critical effectiveness to the accountability of property, such as timely and accurate processing of supply transactions. Lastly, this block discusses documentation, methods for controlling documents, procedures for maintaining accountability over all transactions and procedures to control and manage accountable documents.

BLOCK IV – WAREHOUSING AND STORAGE PRINCIPLES

This block presents methods for planning, designing a warehouse and storage space allocation. The block provides students with a working knowledge of setting up a warehouse and maintaining a location system. Students learn the procedures for the operation of the storage and issue and bench stock elements. Another area includes new concepts and all requirements related to material handling, equipment, warehousing safety and special commodity storage. Students receive hands-on training on forklift operation with emphasis placed on safety. Upon completion, students receive a certificate reflecting the hours of forklift training they received.

BLOCK V – MATERIAL STORAGE AND DISTRIBUTION PROCESSES

This block focuses on the processes and elements of a supply organization that physically deal with property from the time it enters the supply system until it is issued to another organization. This block covers processes to ensure property remains in serviceable condition while in stock and ready for issue to the correct user at the time and place needed. The first part of the block covers receiving and inspection procedures. All aspects covered ensure adequate item identification when receiving property. Another area covers common receipt discrepancies and the appropriate corrective actions. Inspections, identification, rotation of stock and shelf life management ensure the correct management and use of all supply assets. Lastly, property distribution and documentation covers and emphasizes on effective means of maintaining property and documentation accountability.

BLOCK VI – SUPPLY AUTOMATED MANAGEMENT AND WAREHOUSING APPLICATIONS

This block provides students the opportunity to implement all subjects learned throughout the previous blocks of this course. Student conducts an integrated task involving the space planning

and actual layout of a storage facility and organization of a supply squadron. Students begin by positively identifying the material using CD ROM and Technical Order based publications. The second step involves determining the codes and information required to prepare the forms, tags and documents for the management and accountability of property. Students apply all warehousing principles learned to determine the appropriate warehouse location, assign a warehouse location and establish a locator system. Students also establish an automated inventory management database and use it to manage the on-hand inventory. Students process the appropriate transactions to receive, inspect and issue property while adhering to document control procedures.

PREREQUISITES

1. Eligibility requirements: This course is for supply specialists that perform or will perform inventory management and warehouse functions. Therefore, the prospective students need little or no experience in inventory management or warehouse duties.

2. Physical/Medical requirements:

a. Vision: Normal vision

b. Hearing/Speech: Normal hearing and no speech impediments. Due to safety concerns in an industrial environment, students must be able to communicate clearly and effectively to issue/hear safety warnings if required.

c. Other: Normal dexterity

3. IAAFA Entrance examinations:

a. General aptitude: Minimum score of 21.

b. Mechanical aptitude: N/A

c. Mathematics aptitude: N/A

d. Electronic aptitude: N/A

4. Uniform/Equipment: In addition to the uniform requirements listed in the General Clothing Requirements on page 4, students are required to bring one set of work clothes.

*** Summary of Changes:** N/A

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INFORMATION TECHNOLOGY**8 WEEKS****MASL D155065-01****STUDENT LOAD: MIN: 3 MAX: 12****COURSE OBJECTIVE**

This course is designed for all Latin American students who work or will work with computers. People with no computer experience or those who have had limited formal training will benefit from it. This 196-hour course will also benefit people who have been trained more than 3 years ago. Computer security knowledge is demonstrated throughout the course including customer service training. This course will assist all personnel to utilize computers, including: flight line operations, medical staff, security forces, financial personnel, pilots, supply clerks, office staff, instructors and current computer technicians. Students who attend this information technology course will have preference over people who have not attended this course when applying for advanced information technology courses in development.

COURSE DESCRIPTION***BLOCK I - INFORMATION TECHNOLOGY SECURITY**

Students will learn how to defend against tactics used by computer criminals (commonly called hackers) to infiltrate computer systems to gather personal/company information (data, video, audio). They will learn how to combat an attack on a computer network to prevent malicious programs (viruses, Spyware, etc.) from taking over a network. Customer service training will help students better understand customers to achieve a more cohesive working environment.

***BLOCK II - COMPUTER SYSTEM BASICS**

Students will be taught the history of computers. Students will learn how computers work and how they continuously change. They will receive a brief introduction to Artificial Intelligence [(AI), neural networks, remote agents, etc.].

***BLOCK III - WINDOWS OPERATING SYSTEMS**

Students will learn how to install and use the most common Windows operating systems: DOS, Windows 98, Windows NT, Windows 2000 and Windows XP. By the end of this block, each student will be able to independently install, configure and use each of these operating systems.

***BLOCK IV APPLICATIONS SOFTWARE**

Students will learn how to install and use Microsoft Office 2000 (Word, Excel, PowerPoint, Outlook), Adobe Reader, WinZip, Anti-Virus software, Anti-Spyware software, CD-

reproduction software (also called burning or recording software), scanner software and Personal Digital Assistants (PDA's). They will also learn how to operate the Smart Board system (www.Smarttech.com), which allows personnel to enhance any presentation or class. In addition, the course includes a non-technical basic survival PC troubleshooting section to help students troubleshoot their computers.

PREREQUISITES

- 1. Eligibility requirements:** No computer experience is necessary.
 - 2. Physical/Medical requirements:**
 - a. Vision:** Normal color vision.
 - b. Hearing/Speech:** Normal hearing and speech
 - c. Other:** Normal dexterity.
 - 3. IAAFA Entrance examinations:**
 - a. General aptitude:** Minimum score of 20
 - b. Mechanical aptitude:** N/A
 - c. Mathematics aptitude:** N/A
 - d. Electronics aptitude:** N/A
 - 4. Uniform/Equipment:** In addition to the uniform requirements listed in the General Clothing Requirements on page 4, students in this course are required to bring the utility or work uniform (BDUs, fatigues, coveralls).
- * Summary of Changes:** Course objective changed to include information technology security, customer contact training, Personal Digital Assistants (PDA), smart boards, scanners, Windows 2000/NT/XP software installation and optimization. Course minimum changed from 4 to 3 and maximum changed from 8 to 12.

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ON-THE-JOB TRAINING ADMINISTRATION (OJT)**4 WEEKS****MASL D162030****STUDENT LOAD: MIN: 4 MAX: 10****COURSE OBJECTIVE**

This course provides training for officers, NCOs, and civilians to enable them to effectively develop, administer and evaluate On-The-Job Training (OJT) Programs. The course is oriented for middle to upper-level training supervisors and managers who are directly involved with job-specific training activities. The training concepts taught in this course are easily adaptable to any professional specialty and include how to plan an OJT program, administer training, evaluate training programs, prepare training directives, and document an OJT program.

COURSE DESCRIPTION**BLOCK I - OJT ORGANIZATION**

This block covers basic organization of OJT programs. Topics include structure of the OJT program, OJT responsibilities for the supervisor/trainee, presentation of an impromptu speech, developing a specialty job description, and documenting and maintaining training forms and records. The student learns to develop training charts, OJT records, and master task listings as well as determine training needs, capabilities, and resources. Training scheduling processes is also covered.

BLOCK II - HOW TO CONDUCT, EVALUATE, AND DOCUMENT TRAINING

Block II focuses on the actual execution of training programs. Topics include initiating the training process, identification and application of the laws of learning (training related), selecting training strategies and principles, and selecting/applying training methods and techniques. The student learns to develop and apply the demonstration-performance method, as well as select and apply training evaluation methods. Instruction also includes managing the training evaluations process and developing effective written and performance tests.

PREREQUISITES

1. Eligibility requirements: Officer, NCO, or a civilian who administers or manages OJT training activities and functions.

2. Physical/Medical requirements:

a. Vision: N/A

b. Hearing/Speech: Due to a heavy focus on oral presentations, students will require a clear (no stutter or stammer) speaking voice with no speech or hearing impediments.

c. Other: N/A

3. IAAFA Entrance examinations:

a. General aptitude: Minimum score of 21

b. Mechanical aptitude: N/A.

c. Mathematics aptitude: N/A.

d. Electronics aptitude: N/A.

4. Uniform/Equipment: None, other than those mentioned in the General Clothing Requirements on page 4.

*** Summary of Changes:** N/A

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TECHNICAL TRAINING INSTRUCTOR**8 WEEKS****MASL D166041****STUDENT LOAD: MIN: 4 MAX: 10****COURSE OBJECTIVE**

This course prepares experienced officers, NCOs, and civilians to perform instructor duties in their respective specialty. Top Air Force technical training concepts and techniques taught in this course ensure instructors deliver quality instruction. The course is designed to give the student a fundamental base of knowledge, not only on how to conduct classroom instruction, but on how to develop a curriculum as well. The course uses extensive practical exercises to build the student's presentation skills. The end result is a fully certified instructor ready to meet the most demanding instructional assignments.

COURSE DESCRIPTION**BLOCK I - FUNDAMENTALS OF TEACHING**

Instructional techniques and communicative skills lay the foundation for technical instruction. The developmental approach to academic instruction covers instructor roles, responsibilities, and motivational theories. The purpose and use of effective instructional aids is covered in detail. Effective questioning techniques are reviewed and practiced. The students will prepare one informal lecture presentation to practice those technical concepts covered in this block of instruction.

BLOCK II - CURRICULUM DEVELOPMENT

Techniques learned in the fundamentals of teaching block are applied to the instructional system development process. This process teaches the instructor how to develop and maintain a quality course. Development of criterion instructional objectives set the stage for standardized instruction. Development of effective measurement devices is covered and practiced. The student will prepare one informal lecture presentation. This lecture allows the student to further enhance their teaching techniques prior to practice teaching (Block III).

BLOCK III - PRACTICE TEACHING

This block is designed for maximum student participation. The student will apply all instructional techniques covered in the two previous blocks to practice and deliver effective presentations. The students will prepare and present four different presentations; one informal lecture, one demonstration/performance, one guided discussion, and one final lecture using an instructional method chosen by the student and approved by the instructor. Test administration, control, and

security procedures are also covered in detail. Student administration procedures are reviewed and discussed. Instructor counseling techniques are reviewed, practiced, and enhanced through classroom scenarios. This block completes the instructor certification requirement.

PREREQUISITES

1. Eligibility requirements: Officers, NCOs, and civilians with at least two years advanced technical area knowledge or experience within their respective specialty or field. **NOTE:** Pilots requiring preparation for instrument pilot instructor duties should enroll in the Instructor Pilot Instrument Procedures course, MASL D121065. Student must have no less than 9th grade reading level.

2. Physical/Medical requirements:

a. Vision: N/A

b. Hearing/Speech: Due to a heavy focus on oral presentations, the student will require a clear (no stutter or stammer) speaking voice with no speech or hearing impediments.

c. Other: N/A

3. IAAFA Entrance examinations:

a. General aptitude: Minimum score of 28

b. Mechanical aptitude: N/A

c. Mathematics aptitude: N/A

d. Electronics aptitude: N/A

4. Uniform/Equipment: None, other than those mentioned in the General Clothing requirements on page 4.

*** Summary of Changes:** N/A

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INTRODUCTORY AIR INTELLIGENCE**6 WEEKS****MASL D172023****STUDENT LOAD: MIN: 6 MAX: 10****COURSE OBJECTIVE**

This course targets officers O1-O3 and enlisted requiring basic intelligence operations experience. The course prepares personnel with little or no intelligence experience to accept the responsibilities of an intelligence officer or NCO at the unit level. Students receive fundamental information on the different fields within the intelligence community. Instruction includes brief and de-brief, development and use of maps and charts for order-of-battle information as well as target mission folder preparation.

COURSE DESCRIPTION**BLOCK I – MAPS AND CHARTS**

The overall objective of this block is to give the students the capability to use and understand the principles of maps and charts. Students receive instruction on the fundamentals of maps and charts to include distance measurement, course and direction, and are taught to use two specific coordinate systems: geographic and the military grid system. Finally the students build situation maps and order-of-battle displays.

BLOCK II – INTRODUCTION TO INTELLIGENCE

The overall objective of this block is to introduce students to the different fields of specialization within the intelligence community and principles of information security. Students study intelligence officer (analyst) duties and responsibilities, various intelligence specialties, the mission and responsibilities of intelligence in the Air Force environment, intelligence production, and information security. Discussion focuses on air force intelligence career fields and the interrelation of these fields to the intelligence application specialist, the primary focus of the course. Students study the phases of the intelligence cycle from planning to dissemination. Additionally, students learn and apply the principles of security throughout the course in daily operations.

BLOCK III - INTELLIGENCE SUPPORT TO AIR OPERATIONS

The overall objective of this block is to provide students with the necessary skills and confidence to effectively deliver timely professional intelligence products to their customers. During this block of instruction, students learn about the various intelligence briefings and how to conduct and construct them using computer media. Discussion and implementation includes debriefing techniques and reporting with emphasis placed on briefing techniques and basic analysis of message traffic. Students also receive basic visual recognition training for air, ground, and naval systems.

BLOCK IV - TARGETING

The overall objective of this block is to give the student the capability to perform target analysis and prepare target folders and mission briefing/debriefing. The course places emphasis on route and threat analysis. Students also receive basic instruction on plotting information on electronic map software.

BLOCK V – MISSION PLANNING AND FORCE EMPLOYMENT

The course culminates with five days (45 hours) of exercises, which include all areas previously learned in the course. The exercises encompass order-of-battle construction for air, ground, naval, and electronic systems, pre-mission preparation and planning, post-mission debriefing, and a commander's crisis situation briefing. This block also includes law of armed conflict and human rights instruction.

PREREQUISITES

1. Eligibility requirements: Attendees should be (but are not required to be) assigned to an intelligence unit position or have an additional duty of Intelligence Officer or NCO. Some basic computer skills, particularly PowerPoint, are highly desirable.

2. Physical/Medical requirements:

a. Vision: Normal vision

b. Hearing/Speech: Normal hearing ability. Requires a clear speaking voice without speech impediments due to extensive oral briefing and presentations.

c. Other: N/A

3. IAAFA Entrance examinations: N/A

a. General aptitude: Minimum score of 25.

b. Mechanical aptitude: N/A

c. Mathematics aptitude: N/A

d. Electronics aptitude: N/A

4. Uniform/Equipment: None, other than those mentioned in the General Clothing Requirements on page 4.

*** Summary of Changes:** Course under revision, material subject to change.

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INTERMEDIATE AIR INTELLIGENCE**6 WEEKS****MASL D172045****STUDENT LOAD: MIN: 4 MAX: 10****COURSE OBJECTIVE**

This course is targeted for officers O2-O4 and NCOs E7-E9 needing experience and further intelligence career development. The course prepares personnel with junior intelligence experience to accept the responsibilities of an intelligence officer or NCO at the tactical, operational and strategic levels, including international coalition contingencies (e.g. LATAM unit serving in Operation Iraqi Freedom). Instruction includes subjects introduced during the basic course expounded on a more detailed and deeper level. The training allows students to develop unit intelligence training plans at their home base as well as develop an understanding of strategic intelligence and its applications. Students will receive training in information analysis and the relationship between analytical concepts, with digital software application. The course ends with a 5-day exercise in which the students are tasked with the establishment of a simulated intelligence center. The exercise includes application of intelligence support to combat search and rescue, mission preparation and planning, debriefings and a daily crisis-related situational briefing to the unit commander.

COURSE DESCRIPTION**BLOCK I - IMAGERY INTERPRETATION, IR AND RADAR SYSTEMS**

The overall objective of this block is to introduce students to Imagery Intelligence (IMINT) systems and operations, for application in the development of intermediate level mission planning and military target selection.

BLOCK II - INTELLIGENCE SUPPORT TO AIR OPERATIONS II

The overall objective of this block is to provide students with the necessary skills and confidence to develop and administer effective aircrew intelligence training. This training also expounds on visual recognition, Integrated Air Defense Systems (IADS) , and Surface-to-Air (SAM) and Combat Search and Rescue (CSAR) concepts and training.

BLOCK III – STRATEGIC INTELLIGENCE

The overall objective of this block is to introduce students to strategic intelligence concepts. This block covers human rights, intelligence support to Military Operations Other than War (MOOTW), which includes peacekeeping and humanitarian mission applications. Students are introduced to intelligence preparation of the battlefield exclusively applied to counter-drug operation followed by an overview of drug trafficking's transnational impact. Finally, the students are provided detailed instruction concerning international terrorism concepts of a post 9/11 world, including elaboration on various

international, transnational, and domestic terrorist organizations and threats. Students will deal with the relationship between terrorist organizations and hemispheric security.

BLOCK IV – STRATEGIC INTELLIGENCE: GLOBAL PERSPECTIVES

The overall objective of this block is to synthesize knowledge from the previous blocks and merge with an overview of strategic concepts and challenges. This block begins with academic instruction on the US intelligence community organizations as well as an overview of various key international intelligence organizations and their characteristics. Operating methods and respective geopolitical influence are analyzed. This provides the foundation for the remainder of the block, which includes instruction on strategic intelligence concepts applicable to the analysis of regional events, with a focus on strategic indicators, projecting and diagnosing the stability, or lack thereof, in any given global region. This block provides detailed case studies for comparison in order to develop analytical awareness and provide the ability to confidently present intelligence at strategic governmental and military levels. The block concludes with an overview of the strategic issues and challenges facing the US Combatant Command AORs (e.g. USSOUTHCOM, USPACOM, etc.).

BLOCK V – FORCE EMPLOYMENT EXERCISE

This block constitutes the culmination of course knowledge. Students will apply skills and knowledge from this course and the basic intelligence course, or its equivalent to implement an all-scale simulated intelligence operation. Students will commence by organizing and setting up critical equipment necessary for expeditionary units and proving pre-deployment intelligence briefings. Once established, the exercise shall intensify during the span of five days, providing commanders daily intelligence summaries (DISUMs) and briefings, executing mission planning and aircrew debriefings. This exercise includes CSAR applications.

PREREQUISITES

1. Eligibility requirements: Attendees should be assigned to a unit position or have an additional duty of Intelligence Officer or NCO. Students must have graduated from IAAFA's Introductory Air Intelligence Course or equivalent. Military grid reference knowledge is necessary for this course. Some basic computer skills and GPS knowledge are highly desirable.

2. Physical/Medical requirements:

a. Vision: Normal vision

b. Hearing/Speech: Normal hearing ability. Clear speaking voice without speech impediments is needed due to extensive oral briefing/presentations requirements.

c. Other: N/A

3. IAAFA Entrance examinations: N/A

a. General aptitude: Minimum score of 25.

b. Mechanical aptitude: N/A

c. Mathematics aptitude: N/A

d. Electronics aptitude: N/A

4. Uniform/Equipment: None, other than those mentioned in the General Clothing Requirements on page 4.

*** Summary of Changes:** N/A

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GROUND DEFENSE SKILLS**6 WEEKS****MASL D173056****STUDENT LOAD: MIN: 24 MAX: 44****COURSE OBJECTIVE**

This course is designed for security forces personnel (defenders) of any branch charged to protect key resources in the field needed to sustain air operations during peacetime or contingencies. It will take the novice security forces member from a basic understanding of force protection and air base defense, to a mid-level understanding on why and how to protect resources. Classroom instruction is augmented by intense field training exercises, which simulate patrol and urban defense operations. This course benefits anyone interested in force protection, regardless of experience. Students will learn the latest in force protection methodology. Suggested ranks are airman to company grade officers or civilian equivalents.

COURSE DESCRIPTION**BLOCK I - GROUND DEFENSE SKILLS**

The student is taught the primary objectives of active ground defense in which they will learn concepts and principles/threat spectrum, fundamentals of defense, measures and techniques used in the field to control and combat the enemy. The handling of prisoners of war, rules of engagement and law of armed conflict are covered in accordance with international human rights agreements. In tactical communications and use of brevity codes, the student is shown how to install a tactical net and how to encode and decode messages. The students are also taught how to select cross-country routes, what actions to take on enemy contact, introduction to night training and elementary night movement, routines in defense, patrolling and land navigation. Other topics in this block include: personal hygiene and field sanitation, hand grenades, tactical vehicle deployment, camouflage individual/equipment, listening/observation posts, range determination, warning/operations orders, hand and arm signals, cover and concealment, illumination and night observation devices, tactical sentry duties, move under direct fire/move over, through, and around obstacles, tactical vehicle deployment, and electronic security system concept of operation.

BLOCK II - GROUND DEFENSE SKILLS/WEAPONS/FTX

In this block the defender is taught how to select cross-country routes, what actions to take on enemy contact, introduction to night training and elementary night movement, routines in defense, patrolling/land navigation, support weapons, operator maintenance and M-16 familiarization, operator maintenance and M-203 grenade launcher familiarization, operator maintenance, T & E, and range cards on M-60 Machine Gun, familiarization on M-60 machine gun, fire arms training simulator, and close quarter battle drill exercise.

PREREQUISITES

1. Eligibility requirements: Personnel not in a security forces or police specialty code may attend with prior coordination.

2. Physical/Medical requirements:

a. Vision: N/A

b. Hearing/Speech: N/A

c. Other: The following is a table of minimum physical requirement on the first day of training:

Age	Push-Ups	Sit-Ups	2-Mile Run Time
17-21	52	62	≤14:54
22-26	50	57	≤15:36
27-31	48	52	≤16:18
32-36	43	48	≤17:00
37-41	42	43	≤17:42
42-46	36	39	≤18:06
47-51	32	37	≤18:36

3. IAAFA Entrance examinations:

a. General aptitude: Minimum score of 20.

b. Mechanical aptitude: N/A

c. Mathematics aptitude: N/A

d. Electronics aptitude: N/A

4. Uniform/Equipment: No special uniforms or equipment are required other than those mentioned in the General Clothing Requirements on page 4. All specialized gear required for the course training will be provided. One Battle Dress Uniform (BDU) and boots will be issued by IAAFA for this course, see note 2 on page 5.

*** Summary of Changes:** The lesson plans were updated to better reflect contemporary security forces doctrine. Lessons such as Military Operations in Urban Terrain, Tactical Deployment from vehicles and the use of Fire and Maneuver were added. The course was also created as a standalone course, divided from the security forces specialist course.

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SPECIAL REACTION TEAM**6 WEEKS****MASL D173067****STUDENT LOAD: MIN: 5 MAX: 15****COURSE OBJECTIVE**

This course is designed for mid-level security forces members of any branch charged to manage high-risk situations. Suggested ranks are senior airman through company grade officers or civilian police equivalent. This training will take the average security forces or police member to a higher level of knowledge on how to effectively engage in high-risk situations while preserving lives. It greatly benefits those members and supervisors of specialized units who wish to learn and practice all of the phases of high-risk management from team selection to the execution phase.

COURSE DESCRIPTION**BLOCK I - SPECIAL REACTION TEAM DYNAMICS**

The students will begin by learning the importance and effectiveness of highly trained well-equipped small teams capable of performing successfully in high-risk situations. Training includes history, concepts and principles of Special Reaction Team (SRT), the importance of negotiations, weapons employment, protective equipment, SRT weapons courses of fire, built-up area crisis operations, mobile hostage recoveries, protective services, building entry techniques, tactical movements and reconnaissance, perform search and dynamic assault techniques, counter suicide, covert operations, complete warning and operation orders, use of force and human rights, basic rappelling techniques, emergency first aid, leadership reaction exercises, night operations, command and control, suspect search, and apprehension and restraint in accordance with Geneva Convention and international laws of human rights. Cadre will use a state-of-the-art firearms training simulator to challenge students to react to a shoot/don't shoot situation in realistic video scenarios. The students will receive training with Simunitions, our new training aid, duplicating real life operational environments, used in force-on-force confrontation scenarios.

PREREQUISITES

- 1. Eligibility requirements:** Personnel that are or will be assigned as a member or leader of a special reaction team.
- 2. Physical/Medical requirements:**
 - a. Vision:** N/A
 - b. Hearing/Speech:** N/A

c. Other: This course is the most physically demanding conducted at the IAAFA. The student should be in top physical condition. Exercises consisting of the following: initial warm-up exercises performed to a four count (minimum of 25 repetitions), leg-spreads, windmills, leg-lifts, sit-ups, belly-busters and side benders, push-ups, sit-ups, crunches, pull-ups, and 30-meter fireman carries. The student is required to pass a physical conditioning test upon graduation. The following chart is the minimal standard used to evaluate the student's physical requirements upon arrival:

Age	Push-Ups	Sit-Ups	2-Mile Run Time
17-21	52	62	≤14:54
22-26	50	57	≤15:36
27-31	48	52	≤16:18
32-36	43	48	≤17:00
37-41	42	43	≤17:42
42-46	36	39	≤18:06
47-51	32	37	≤18:36

3. IAAFA Entrance examinations:

a. General aptitude: Minimum score of 20.

b. Mechanical aptitude: N/A

c. Mathematics aptitude: N/A

d. Electronics aptitude: N/A

4. Uniform/Equipment: No special uniforms or equipment are required other than those mentioned in the General Clothing Requirements on page 4. All specialized gear required for the course training will be provided. Battle Dress Uniform (BDU) and boots are issued by IAAFA for this course, see note 2 on page 5.

*** Summary of Changes:** N/A

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SECURITY FORCES APPRENTICE*6 WEEKS****MASL D173068****STUDENT LOAD: MIN: 24 MAX: 44****COURSE OBJECTIVE**

This course is designed for security forces members of any branch who are charged to protect key resources in an installation needed to sustain air operations during peacetime or contingencies, as well as law enforcement/military police duties. It will take the novice security forces member from a basic understanding of force protection, to a mid-level understanding on how and why to protect resources. This course benefits anyone interested in force protection, regardless of experience. Students will learn the latest in force protection methodology. Suggested ranks are airman to junior officers or civilian equivalent.

COURSE DESCRIPTION**BLOCK I – LAW ENFORCEMENT APPRENTICE**

The students will learn the law enforcement duties of a security force member, the importance of guard mount (shift change), community relations, integrity and ethics, weapons safety and the proper use of force. They will also learn how to identify vulnerabilities in security programs, how to challenge persons on foot, how to conduct individual, building and vehicle searches and how to conduct a vehicle traffic stop. Students undergo M9 familiarization and learn operator maintenance. In addition the student will learn procedures of crisis intervention, securing crime scenes, and securing high risk incidents and alarm responses. Cadre will use a state-of-the-art firearms training simulator to challenge students to react to shoot-no-shoot situations in realistic video scenarios. Students are introduced to Simunition marker cartridges, our latest force-on-force training aid. In addition to written examinations, students are evaluated on all subjects in an established training area.

BLOCK II – SECURITY APPRENTICE

During this block the student will learn security duties to include response forces, anti-terrorism and physical security safeguards. This block also covers the functions of central security control, communications, sentry duties, the use of restricted area badges, convoy operations and use of base grid maps in conjunction with securing major accidents and disaster areas. Defensive and offensive rifle techniques are additional objectives covered in this course. Finally, students will undergo M16 rifle familiarization and learn operator maintenance. In addition to written examinations, students are evaluated on all subjects in an established security training area.

PREREQUISITES

1. Eligibility requirements: Open to all security forces members charged in protecting or managing the protection of resources used to sustain air operations. Police and other specialty codes may attend with prior coordination.

2. Physical/Medical requirements:

a. Vision: N/A

b. Hearing/Speech: N/A

c. Other: The following is a table of minimum physical requirement on the first day of training:

Age	Minimal Push-Ups Required	Minimal Sit-Ups Required	2-Mile Run Time
17-21	52	62	≤14:54
22-26	50	57	≤15:36
27-31	48	52	≤16:18
32-36	43	48	≤17:00
37-41	42	43	≤17:42
42-46	36	39	≤18:06
47-51	32	37	≤18:36

3. IAAFA Entrance examinations:

a. General aptitude: Minimum score of 20.

b. Mechanical aptitude: N/A

c. Mathematics aptitude: N/A

d. Electronics aptitude: N/A

4. Uniform/Equipment: No special uniforms or equipment are required other than those mentioned in the General Clothing Requirements on page 4. All specialized gear required for the course training will be provided. One set of Battle Dress Uniforms (BDUs) and boots will be issued by IAAFA for this course, see note 2 on page 5.

*** Summary of Changes:** This course was previously named Security Force Specialist

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*** INTERNATIONAL ANTI-TERRORISM I****1 WEEK****MASL 126013****STUDENT LOAD: MIN: 5 MAX: 20****COURSE OBJECTIVE**

This course is designed to instruct all members of the armed forces and their civilian counterparts regardless of specialty and or rank the basic concepts of antiterrorism. This course is designed for anyone interested in antiterrorism force protection measures regardless of level of experience. This course is a prerequisite for the Antiterrorism Level II course.

COURSE DESCRIPTION**BLOCK I - ANTITERRORISM LEVEL I DYNAMICS**

The student will define the word terrorism, identify facts and state the history of terrorism, describe what a terrorist group is, the perspectives and long range objectives of terrorism, individual ideologies that motivate people to bind together into terrorist groups, mechanisms used to label terrorist groups, immediate goals and common characteristics of terrorist groups, the typical internal organization of terrorist groups, and typical training programs used by terrorist groups at the organizational and individual levels. The student will begin by learning the characteristics of terrorist operations, describe the phases of a terrorist incident, discuss the most common terrorist acts, explain the types of weapons used by terrorist, and list the countries that supply the major portion of terrorist weaponry. Describe the objectives, characteristics, and techniques of terrorist surveillance and explain the techniques for detecting and reporting terrorist surveillance. The student will become familiar with the measures to take to determine the threat, how terrorist identify their victims, and terrorist target selection considerations. They will explain residential, office and hotel protective measures along with car bomb search techniques. Explain the psychology of hostage taking, personal contingency planning, the actions taken by a hostage at the moment of capture, and the effects of the Stockholm Syndrome and describe DOD peacetime guidance, the techniques for adjusting to captivity, and the actions taken by a hostage during rescue or release.

PREREQUISITES

- 1. Eligibility requirements:** Personnel may be from any specialty, military or civilian.
- 2. Physical/Medical requirements:**
 - a. Vision:** N/A
 - b. Hearing/Speech:** N/A

c. Other: N/A

3. IAAFA Entrance examinations:

a. General aptitude: Minimum score of 20.

b. Mechanical aptitude: N/A

c. Mathematics aptitude: N/A

d. Electronics aptitude: N/A

4. Uniform/Equipment: None, other than those mentioned in the General Clothing Requirements on page 4. All specialized gear required for the course training will be provided.

*** Summary of Changes:** N/A

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*** INTERNATIONAL ANTI-TERRORISM II****1 WEEK****MASL 126014****STUDENT LOAD: MIN: 5 MAX: 20****COURSE OBJECTIVE**

Designed to prepare mid-level (E-6) to high-ranking members of any branch of the military or civilian counterparts to advise installation commanders in antiterrorism matters. Lessons learned will give students advanced antiterrorism knowledge to help them assess antiterrorism measures necessary for the protection of personnel and other military resources.

COURSE DESCRIPTION**BLOCK I ANTITERRORISM LEVEL II DYNAMICS**

The students will identify and understand the different roles of the intelligence (INTEL) and counterintelligence (CI) agencies as well as additional sources that provide critical information and discuss how best to fuse the information with antiterrorism (AT) advisors to provide in garrison and deployed commanders with valuable, usable, and timely local threat information. Ensure that each individual understands antiterrorism roles and responsibilities, training requirements and how to organize for Antiterrorism. The student will identify basic physical security considerations as they apply to installations and facilities. The objective of this lesson is to familiarize the student with the purpose of the vulnerability assessment, the functions of the assessment, and the process one must go through in order to conduct an assessment. The vulnerability elements associated with an assessment, the application of physical security and assessments, and the procedures for actually conducting an assessment.

PREREQUISITES

- 1. Eligibility requirements:** Personnel must have completed the Antiterrorism Level I course.
- 2. Physical/Medical requirements:** N/A
 - a. Vision:** N/A
 - b. Hearing/Speech:** N/A
 - c. Other:** N/A
- 3. IAAFA Entrance examinations:**
 - a. General aptitude:** Minimum score of 20.

b. Mechanical aptitude: N/A

c. Mathematics aptitude: N/A

d. Electronics aptitude: N/A

4. Uniform/Equipment: None, other than those mentioned in the General Clothing Requirements on page 4. All specialized gear required for the course training will be provided.

*** Summary of Changes:** N/A

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RULE OF LAW AND DISCIPLINED MILITARY OPERATIONS**1 WEEK****MASL D176006****STUDENT LOAD: MIN: 10 MAX: 20****COURSE OBJECTIVE**

The objective of this course is to teach international officers and NCOs of any military force the basics of the international rules of law and their impact on human rights, including how these international standards fit into the planning of military operations. This information is vital to any country that may participate in international peacekeeping missions sponsored by the United Nations. This is an Expanded International Military and Education Training course offered between periods A and B, B and C, and if the schedule permits, at the end of C period.

COURSE DESCRIPTION

The Defense Institute of International Legal Studies, a detachment of the US Naval Justice School, teaches this course at the academy. The course is a week-long guided discussion seminar conducted by Spanish speaking JAGs of the US Air Force with no final exam. Subjects of discussion include rules of engagement, the law of armed conflict, the role of a military justice system, and human rights. Depending on availability, the students will spend an afternoon visiting an actual military courtroom located at Lackland AFB, TX.

PREREQUISITES

1. Eligibility requirements: All officers and NCOs of any international military force are eligible.

2. Physical/Medical requirements:

a. Vision: N/A

b. Hearing/Speech: N/A

c. Other: N/A

3. IAAFA Entrance examinations:

a. General aptitude: N/A

b. Mechanical aptitude: N/A

c. Mathematics aptitude: N/A

d. Electronics aptitude: N/A

4. Uniform/Equipment: None, other than those mentioned in the General Clothing Requirements on page 4.

*** Summary of Changes:** N/A

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HUMAN FACTORS IN AVIATION**1 WEEK****MASL D117060****STUDENT LOAD: MIN: 8 MAX: 20****COURSE OBJECTIVE**

This course is targeted for aircrew members, officers and NCOs that require familiarization with human factors that may affect their performance. The course analyzes frequent physical, emotional, and medical events that may impede the normal response during the daily work that requires full concentration. The students will become aware of several human factors that may increase the risk for fatal errors. The course duration is 4.5 days, and includes a half-day class at the Night Vision Laboratory at Brooks AFB.

COURSE DESCRIPTION**DAY 1**

The first day of lectures will briefly introduce the student to the history of aerospace medicine and the present operational doctrine. In the afternoon, the lectures will focus on aircraft accidents and risk factors that may produce them.

DAY 2

On the second day, the lectures will provide the students basic knowledge of environmental factors that may produce an adverse outcome with emphasis in the consequences of the gravity force and how to compensate those effects. The changes produced by the gravitational force in the respiratory and cardiovascular systems are taught at a basic level and modified according to the audience background.

DAY 3

There are two main objectives on this day. First, to demonstrate the students what spatial disorientation is, and how it affects the aircrew member. Secondly, introduce the student to the night operations with review of available technology. In the afternoon, the classes will take place at the Night Vision Laboratory, Brooks City Base.

DAY 4

In the morning, the lectures will go over the main life support systems used during a flight. During the afternoon, the student will learn the benefits and the potential adverse reactions produced by frequently prescribed drugs and common over the counter medications. The day ends with a general review of decompression sickness.

DAY 5

On this day, the student will recognize how most of the common environmental factors may affect the job performance. The day also includes a basic presentation on psychiatric emergencies, and lectures on operational risk management and crew resource management. As required by the IAAFA a test is taken. Before the course's conclusion, the students will evaluate it.

PREREQUISITES

1. Eligibility requirements: All officers and NCOs of any international military force are eligible.

2. Physical/Medical requirements:

a. Vision: N/A

b. Hearing/Speech: N/A

c. Other: N/A

3. IAAFA Entrance examinations:

a. General aptitude: N/A

b. Mechanical aptitude: N/A

c. Mathematics aptitude: N/A

d. Electronics aptitude: N/A

4. Uniform/Equipment: None, other than those mentioned in the General Clothing Requirements on page 4.

*** Summary of Changes:** N/A

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AVIONICS/ELECTRONIC MAINTENANCE TRAINING COURSES

FIRST LEVEL COURSES**ELECTRONIC FUNDAMENTALS****12 WEEKS****MASL D131119-01****STUDENT LOAD: MIN: 2 MAX: 8****COURSE OBJECTIVE**

This course provides students with the training and knowledge in mathematics necessary to solve formulas related to the principles of electronic circuitry. It provides basic troubleshooting skills and schematic interpretation and analysis. This course is a prerequisite for the Avionics Communications/Navigation Equipment Course, the Ground Radio Communication Equipment Technician Course and the Avionics Instrument Course. Students are required to pass a written and or performance test at the end of every block prior to advancement to the next block of instruction.

COURSE DESCRIPTION**BLOCK I – MATH IN ELECTRONICS**

This block begins with a course orientation in which students are made aware of the academy's policies, procedures, safety hazards, and first aid. Students examine the basic mathematical operations most commonly used in electronic applications. Students examine the powers of ten, exponential notation, scientific notation, metric conversion, and algebraic equations.

BLOCK II – DIRECT CURRENT (DC) CIRCUITS

In block II an in-depth assessment of electron flow, DC theory, and basic circuit construction is provided. Students examine the electronic units of measurement for voltage, current, resistance, power and their electronic symbols. Next, they analyze Ohm's Law and associated formulas. After which, they examine the effects of resistance in basic series and parallel DC circuit construction. Material presented in this block is reinforced in the classroom with "hands-on" experiments.

BLOCK III – ALTERNATING CURRENT (AC) CIRCUITS

Students examine Kirchoff's law, AC theory and generation, and gain a solid understanding of magnetism and induction principles. This knowledge is then applied to inductors and transformers in AC circuits. Next, students are introduced to the principles of capacitance. Both inductors and capacitors are combined to allow students to see the principles of frequency regulation and AC generation. Students have the opportunity to gain hands-on experience in the

laboratory with oscilloscopes. Material presented in this block is reinforced in the laboratory with hands-on experiments.

BLOCK IV – RCL CIRCUITS

Block IV builds on DC and AC theories, principles and applications discussed in previous blocks. Students explore various circuits, their applications and the effects of combining resistance, capacitance, and inductance (RCL) in one circuit. Also, frequency regulation is further discussed with an emphasis on resonance, signal harmonics, coupling and filtering. Material presented in this block is reinforced in the laboratory with hands-on experiments.

BLOCK V – SOLID-STATE PRINCIPLES

Block V examines the structure, construction, and principles of solid-state devices beginning with basic atomic structure and theory. Next, an explanation of how crystals and semiconductors are constructed for various applications in electronics is discussed. The most commonly used solid-state devices are examined. The various types of diodes and transistors are defined and their theories of operation fully explored. Material presented in this block is reinforced in the laboratory with hands-on experiments.

BLOCK VI – SOLID STATE AMPLIFIERS

This block provides an in-depth examination of solid-state amplifier principles and applications. Particular attention is paid to power amplifiers, narrow-band amplifiers and wide-band amplifiers. Each amplifier's construction, theory of operation and application is discussed in detail. Material presented in this block is reinforced in the laboratory with hands-on experiments.

BLOCK VII – WAVESHAPING CIRCUITS

This block covers various methods used in electrical signal wave shaping. Students examine the construction, theory of operation and applications of oscillators, frequency multipliers, and multivibrators. Material presented in this block is reinforced in the laboratory with hands-on experiments.

BLOCK VIII – GENERATORS AND POWER SUPPLIES

Block VIII explores electrical signal and power generation. Students examine sawtooth generators, current limiters, clammers, rectifier circuits, signal filters, voltage regulators, and power supplies. Construction, theory of operation, application and troubleshooting is discussed in-depth. Material presented in this block is reinforced in the laboratory with hands-on experiments.

*** BLOCK IX – TRANSMITTER AND RECEIVER SYSTEMS**

This block covers the basic theory, principles and methods used in radio communication. Students examine the principles of heterodyning. Next, signal modulation is discussed with particular emphasis on amplitude modulation (AM), frequency modulation (FM) and their theory of operation and construction. Students examine antenna construction, theory of operation and various applications. Finally, students will gain in-depth knowledge on AM and FM transmission, reception, and troubleshooting techniques. Material presented in this block is reinforced in the laboratory with hands-on experiments.

PREREQUISITES:

1. Eligibility requirements: This course is open to all ranks or civilian equivalent. Students must have math knowledge on first-degree equations with one unknown and basic trigonometry functions.

2. Physical/Medical requirements:

- a. Vision:** Normal color vision.
- b. Hearing/Speech:** Normal hearing and speech.
- c. Other:** Manual dexterity, and the ability to lift a minimum of 40 pounds.

3. IAAFA entrance examinations:

- a. General aptitude:** Minimum score of 21
- b. Mechanical aptitude:** N/A
- c. Mathematics:** Minimum score of 21
- d. Electronics aptitude:** N/A

4. Uniform/Equipment: In addition to the uniform requirements listed in the General Clothing Requirements on page 4, students will require Battle Dress Uniforms (BDU's). Non-conductive plastic eyeglass frames are mandatory for students who wear eyeglasses.

***Summary of Changes:** These changes reflect adjustments made to course after validation. Course was streamlined and unit hours were modified and or adjusted.

-Block II: Hours changed from 36 to 48.

-Block III: Hours changed from 36 to 48

-Block IX: Digital Techniques I deleted (24 hours) Transmitter and Receiver Systems added (42 hours)

- Block X: Digital Techniques II deleted. (42 hours)

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AVIONICS COMMUNICATION/NAVIGATION EQUIPMENT TECHNICIAN**12 WEEKS****MASL D133060-01****STUDENT LOAD: MIN: 4 *MAX: 8****COURSE OBJECTIVE**

This specialized course provides students with training on inspection, maintenance, alignment, repair, and installation of avionics communications/navigation equipment. Upon completion students will identify theory of operation, analyze schematics and have acquired hands-on training on minimum performance tests and alignments. Students are required to pass a written and or performance test at the end of certain blocks prior to advancement to the next block of instruction.

COURSE DESCRIPTION**BLOCK I – ADF-60**

The students learn the theory of operation, component characteristics, system block diagrams, and schematics for the antenna, receiver and instrumentation. During the laboratory portion of instruction, students learn the requirements for minimum performance checks and alignment. The following test equipment is used: ADF test set, ADF receiver, 479S-6 VOR/ILS signal generator, audio output meter TS-585, digital multimeter, and oscilloscope.

BLOCK II – VIR-30 VOR/ILS NAVIGATION SYSTEM

The students learn system theory of operation and characteristics, component and system block diagrams, as well as schematics, which includes: ground transmitter, receiver and detailed receiver. During in-shop minimum performance checks and alignment, students are familiarized with the operation of test equipment, appropriate safety measures and proper maintenance procedures. Test equipment used during this course includes VOR/ILS test set, VIR-30 receiver, 479S-6 VOR/ILS signal generator, audio output meter TS-585, digital multimeter, and oscilloscope.

BLOCK III – DME-40

Students learn system theory of operation and characteristics, component and system block diagrams that includes: receiver-transmitter, 339F-12 indicator, analog distance circuit and receiver-transmitter special circuits. During in-shop performance checks and alignment, students are familiarized with the operation of test equipment, appropriate safety measures and proper maintenance procedures. Test equipment used during the course includes DME test bench, DME-40 receiver-transmitter, signal generator, audio output meter TS-585, digital multimeter, and oscilloscope.

BLOCK IV – AIC-18 INTERCOMMUNICATIONS SYSTEM

This block covers the purpose and characteristics of the system components, block diagram, schematic diagram, minimum performance check, and troubleshooting the equipment. Test equipment used: AIC-18 intercommunications test panel, analog multi-meter, 8025A, 8600A fluke digital voltmeter, and 6267B power supply.

BLOCK V – AN/ARC 186-2 VHF RADIO

This block covers the purpose and characteristics of the equipment, equipment components, block diagram, detailed block diagram, minimum performance check, and alignment. Test equipment used: J3407/ARM-173 junction box, 8640B signal generator, TS-585 output meter, 331A/334A distortion analyzer, wattmeter ME11U, 61, and AF-4301, multi-meter, 8025A fluke digital voltmeter, 6152A counter/timer, 1992 universal counter, 2246 digital oscilloscope, TM spectrum analyzer, AN/URM-127 signal generator, and 6267B power supply.

PREREQUISITES

1. Eligibility requirements: Successful completion of Electronic Fundamentals, MASL D131119, or equivalent electronic fundamentals course.

2. Physical/Medical requirements:

- a. **Vision:** Normal color vision
- b. **Hearing/Speech:** Normal hearing and speech.
- c. **Other:** N/A

3. IAAFA entrance examination

- a. **General aptitude:** N/A
- b. **Mechanical aptitude:** Minimum score of 25
- c. **Mathematics aptitude:** Minimum score of 20
(First-degree equations with one unknown and basic trigonometry functions.)
- d. **Electronic aptitude:** Minimum score of 25

4. Uniform/Equipment: In addition to the uniform requirements listed in the General Clothing Requirements on page 4, non-conductive plastic frames for eyeglasses are mandatory for students who wear glasses.

***Summary of Changes:** N/A

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GROUND RADIO COMMUNICATIONS EQUIPMENT TECHNICIAN**12 WEEKS****MASL D132080-01****STUDENT LOAD: MIN: 4 MAX: 8****COURSE OBJECTIVE**

This course is designed to provide the student with technical training in the inspection, repair, alignment and maintenance of general ground radio communications equipment. Theory, operation, schematic analysis, hands-on bench checks, alignments, and troubleshooting are included in the curriculum for the various radios listed below. Students are required to pass a written and or performance test at the end of each block prior to advancement to the next block of instruction.

COURSE DESCRIPTION***BLOCK I - ULTRA HIGH FREQUENCY (UHF) RECEIVER AN/GRR-24**

This block starts with a course orientation in which students are made aware of the academy's policies and procedures, safety hazards and first-aid. An introduction to UHF receiver, theory of operation, functional analysis, troubleshooting procedures, and special alignment techniques are also presented. Students are introduced to radio frequency signal generators, audio distortion analyzers, and AC/DC multimeter operating procedures. Students will be required to perform sensitivity, signal + noise/noise, and frequency accuracy checks.

***BLOCK II – ULTRA HIGH FREQUENCY (UHF) TRANSMITTER AN/GRT-22**

Block II begins with technical characteristics, theory of operation, schematic analysis, equipment alignment, and troubleshooting procedures for UHF radio transmitter. Keying, modulation methods, and analysis are discussed. Advantages and disadvantages of Amplitude Modulation (AM) in a communications system are highlighted. Students are introduced to test equipment procedures and are required to perform modulation analysis, Radio Frequency power output alignments, Radio Frequency carrier frequency stability checks, and modulating signal alignments. Students are also required to perform checks using audio signal generators, Radio Frequency wattmeters, crystal mixers, oscilloscopes and modulation meters.

***BLOCK III – FREQUENCY MODULATED (FM) VERY HIGH FREQUENCY (VHF) TRANSCEIVER AN/PRC-77**

In block III, students are introduced to tactical FM communications, general principles of FM, technical characteristics and theory of operation. Students are familiarized with schematic analysis of FM transceiver, equipment use, performance checks, alignments, and troubleshooting procedures.

***BLOCK IV – HIGH FREQUENCY (HF)/SINGLE SIDEBAND SYNTHESIZED TRANSCEIVER (SSB) AN/URC-119**

Block IV begins with an introduction to the theory and operating principles of HF/SSB communication equipment, technical characteristics, equipment familiarization, alignment and troubleshooting procedures. Advantages and disadvantages of HF/SSB communication systems are discussed. Students are familiarized and provided hands-on training on Spectrum Analyzer during the alignment and troubleshooting portions of this block.

***BLOCK V – HIGH FREQUENCY (HF) SINGLE SIDEBAND (SSB) RADIO SYSTEMS**

This course concludes with the theory of the propagation of electromagnetic radiation, transmission lines, coaxial cable selection, antenna theory and field application of omni directional and directional antennas. Practical application of fixed and mobile radio systems are discussed. Students are taught troubleshooting techniques to isolate problems to major functional components. Finally, students are introduced to general installation and maintenance of antennas, long haul communications theory and grounding systems.

PREREQUISITES

1. Eligibility requirements: Successful completion of Electronic Fundamentals, MASL 131119 or an equivalent course.

2. Physical/Medical requirements:

- a. Vision:** Normal color vision or correctable with eyeglasses and no color blindness.
- b. Hearing/Speech:** Normal hearing and speech.
- c. Other:** N/A

3. IAAFA entrance examination:

- a. General Aptitude:** N/A
- b. Mechanical Aptitude:** N/A
- c. Mathematics Aptitude:** Minimum score of 20
- d. Electronics Aptitude:** Minimum score of 20

4. Uniform/Equipment: In addition to the uniform requirements listed in the General Clothing Requirements on page 4, non-conductive plastic frames for eyeglasses are mandatory for students who wear glasses.

*** Summary of Changes:** These changes reflect adjustments required to reduce the

course from 16 weeks to 12 weeks. Course was streamlined and unit hours were modified and or adjusted.

- **Block I:** AN/GRR-24 Receiver, decreased teaching time from 86 hours to 80 hours, eliminated troubleshooting time.

- **Block II:** AN/GRT-22 Transmitter, decreased teaching time from 88 hours to 85, eliminated troubleshooting time.

- **Block III:** AN/PRC-77 Transceiver, decreased teaching time from 78 hours to 75.5 hours, eliminated performance test and troubleshooting time.

- **Block IV:** AN/URC-119 HF Transceiver, decreased teaching time from 78 hours to 70 hours, eliminated maintenance/alignment and troubleshooting time.

- **Block V:** HF Antennas and RF Transmission lines decreased teaching time from 72 hours to 49.5 hours, eliminated dipole antenna fabrication and installation.

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AVIONICS INSTRUMENTS TECHNICIAN**12 WEEKS****MASL 141253-01****STUDENT LOAD: MIN: 4 MAX: 12****COURSE OBJECTIVE**

The course is designed to take apprentice-level students through all phases of the various avionics guidance and control systems. Additionally, they will learn identification and relationship of associated systems. They will be able to state principles and facts of all systems and associated systems.

COURSE DESCRIPTION**BLOCK I – ELECTROMECHANICAL DEVICES**

This block starts with a course orientation in which students are made aware of the academy's policies and procedures, safety hazards and first aid. Students are then familiarized with aircraft and the flight theory needed for subsequent blocks of instruction. Finally, the theory of basic electromechanical devices is covered to establish the background for more complex systems. Students learn the principles of operation, terminology, and characteristics of transformers, relays, motors and generators, and remote position indicating systems such as Synchros, Magnesyn and Selsyn.

BLOCK II – DIRECT PRESSURE AND LIQUID QUANTITY INDICATING SYSTEMS

Block II of instruction introduces students to aircraft fuel quantity indication systems. The principles of operation, terminology, and characteristics are explained, to include: resistive type fuel quantity indicating systems, capacitance type fuel quantity indicating systems, and direct pressure indicating systems. Students will learn to use test equipment such as the liquidometer Type O-1 and the capacitive fuel quantity tester GTF-6.

BLOCK III – BAROMETRIC FLIGHT INSTRUMENTS

Block III begins with the introduction of aircraft pitot-static systems. It covers the theory of barometric altimeters; vertical velocity indicators; and airspeed indicators. It concludes by covering different types of encoding altimeter systems such as AIMS. Students will perform a complete checkout of a pitot-static system and all associated instruments using the TTU-205F tester. Additionally, they learn to use the TTU-229 tester for checkout of electric altimeter encoders.

BLOCK IV – ENGINE INSTRUMENT SYSTEMS

In Block IV students will learn the principles of operation and terminology of engine instrument indication systems. Students are familiarized with the characteristics of synchronous pressure indicating systems, fuel flow indicating systems, tachometer indicating systems, temperature indicating systems, and torque indicating systems. Students will learn to use test equipment such as the TTU-23 for synchronous systems, the TTU-27 for checking instruments and transmitters in a tachometer system, and the Jet-Cal tester for thermocouple testing.

BLOCK V – INTEGRATED FLIGHT INSTRUMENT SYSTEMS

This block of instruction covers the principles of operation, terminology, and characteristics of the G-meter, Gyroscopic Principles, Turn and Bank Indicator, Self Contained Attitude Indicators such as the J-8, Remote Attitude Indicating Systems, and Flight Director Systems. Students will get hands-on training and interaction with working mockups of these systems.

BLOCK VI – COMPASS SYSTEMS

During block V students will learn the principles of operation, terminology, and characteristics of the standby compass, and electronic gyro compass systems such as the J-2 or C-12. Students will be involved in the performance of a complete compass swing of the standby compass on the flight line using a real aircraft such as the A-37. A working mockup of the electronic compass is provided for interaction and hands on training.

BLOCK VII – STALL WARNING AND AUTOPILOT SYSTEM

In this final block of instruction students will learn the principles of operation, terminology, and characteristics of the Stall Warning System and the E-4 Autopilot System (including all of its components). Students accomplish a complete functional analysis of the system using technical order wiring diagrams. They will gain valuable knowledge applicable to all autopilot systems in general. A C-130 mockup is provided in order to perform hands on training and troubleshooting.

PREREQUISITES

1. Eligibility requirements: Open to all enlisted, officers, and/or civilian equivalents. Successful completion of Electronic Fundamentals, MASL 131119 or an equivalent Electronic Fundamentals course.

1. Physical/Medical requirements:

- a. Vision:** Normal color vision, plastic or non-conductive frame glasses (if worn).
- b. Hearing/Speech:** Normal hearing and speech.
- c. Other:** N/A

3. IAAFA entrance examinations:

- a. General aptitude:** N/A
- b. Mechanical aptitude:** Minimum score of 25
- c. Mathematics aptitude:** Minimum score of 25
- d. Electronics aptitude:** Minimum score of 25

4. Uniform/Equipment: None, other than those mentioned in the General Clothing Requirements on page 4.

*** Summary of Changes:** N/A

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AIRCRAFT ELECTRICAL FUNDAMENTALS TECHNICIAN**12 WEEKS****MASL D141254-01****STUDENT LOAD: MIN: 4 MAX: 12****COURSE OBJECTIVE**

This course provides aircraft electrical fundamentals for the apprentice level student. The course is the foundation for future aircraft electrical system maintainers. They will have the knowledge to confidently repair aircraft electrical systems. Graduates will be ready for enrollment in an advanced aircraft electrical course. Students are introduced to aircraft safety, electrical theory and principles, hand-tools, equipment, and maintenance operational procedures. Communication, navigation, and armament systems are excluded. Students are required to pass a written and or performance test at the end of certain blocks prior to advancement to the next block of instruction.

COURSE DESCRIPTION**BLOCK I – FUNDAMENTALS**

Instruction begins with an introduction to the Aircraft Electrical Fundamental Course. Subject areas covered in this block range from student in-processing to course outline and content. With an open forum, students will move through a wide variety of subjects. Some of the topics discussed in this block: ground safety, math operations, control devices electron, and measuring devices (volt, ohm and ampere meters).

BLOCK II – PRINCIPLES

After successful completion of block I, students will move on to block II, Principles of Electricity. Some of the subject areas covered in this block include: electron theory, magnetism, transformers, Ohms Law, series/parallel circuits, magnetic devices, solid state devices, inductors, and capacitors. This block of instruction prepares the students for the following blocks of instruction.

BLOCK III – MAINTENANCE FUNDAMENTALS

Students are now ready to apply principles and hands-on techniques learned in blocks I and II. They will work with safety devices used to secure parts and components on the aircraft. Students will work on wire maintenance techniques to include: connector plug maintenance and wire inspection techniques. Finally, students learn and actually perform soldering applications.

BLOCK IV – ALTERNATING CURRENT (AC) POWER SYSTEMS

Theory from prior blocks are needed in block IV. Areas discussed in this block include: aircraft AC power systems, AC generators, protection devices, power supply, power distribution, and

transformer rectifiers. The knowledge acquired in this block will carry the students through the rest of the course and their careers.

BLOCK V – DIRECT CURRENT (DC) POWER SYSTEMS

Building on previous blocks, students now learn the operating principles of aircraft electrical power production systems. Some of the topics include: nickel-cadmium batteries, lead-acid batteries, DC generators, inverters, protection devices, and DC Motors.

BLOCK VI – MISCELLANEOUS SYSTEMS TROUBLESHOOTING TECHNIQUES

After successfully completing all prior block students will use the theory, hands-on practice and techniques learned towards troubleshooting various systems and scenarios. Students perform operational checks and troubleshooting techniques using electrical diagrams, multimeters, aircraft simulator trainers, and ground instructional training aircraft. During this final block students learn troubleshooting techniques of the following: landing gear, nose steering, lighting, flight control, fire warning, and fire extinguishing systems.

PREREQUISITES

- 1. Eligibility requirements:** Open to all enlisted, officers, and/or civilian equivalents.
- 2. Physical/Medical requirements:**
 - a. Vision:** Normal color vision, plastic or non-conductive frame glasses (if worn)
 - b. Hearing/Speech:** Normal hearing
 - c. Other:** As a minimum, students must be able to lift 50 Lbs. unassisted.
- 3. IAAFA entrance examinations:**
 - a. General aptitude:** Minimum score of 20.
 - b. Mechanical aptitude:** Minimum score of 20.
 - c. Mathematics aptitude:** Minimum score of 25.
 - d. Electronics aptitude:** N/A
- 4. Uniform/Equipment:** No special uniforms or equipment are required other than those mentioned in the General Clothing Requirements on page 4.

*** Summary of Changes:** This course was previously referred to as Aircraft Electrical Repair

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ADVANCED AVIONICS/ELECTRONIC REPAIR COURSES**GENERAL MAINTENANCE REPAIR AND BASIC SOLDERING****5 WEEKS****MASL D131123-01****STUDENT LOAD: MIN: 2 MAX: 6****COURSE OBJECTIVE**

This course focuses on general repair techniques common to all maintenance technicians. During this course students will receive in class study and examine principles and techniques used to repair common items such as: wire harness, wire termination, and basic soldering. Material presented in the classroom is reinforced through extensive laboratory projects and hands on practice of all the techniques discussed.

COURSE DESCRIPTION**BLOCK I – GENERAL MAINTENANCE REPAIR**

Areas covered in this block range from student in-processing to course outline and content. After the formal course introduction, students will move through a wide variety of subjects. Some of the topics discussed in this block include ground safety, control devices, schematic diagrams and test equipment.

BLOCK II – GENERAL MAINTENANCE REPAIR

This block covers different basic maintenance repair techniques common to all equipment. Students will begin learning common electronic-static devices and the soldering process, stripping and tinning of wires. Students learn to prepare and solder wires to terminals and various forms of general connectors, splices, and terminals. Finally, students learn the principles and use of safety wire and wire harness bundling.

BLOCK III – SOLDERING

In block III students learn how to prepare and solder electronic components on printed circuit boards, finally they then practice removal of electronic components from printed circuit boards.

PREREQUISITES

1. Eligibility requirements: This course is open to all ranks or civilian equivalent. Students must have math knowledge on first-degree equations with one unknown and basic trigonometry functions. Students programmed for this course must have completed, as a minimum, the

Electronics Fundamentals course, MASL D131119, or equivalent, and have 2 years of practical experience.

2. Physical/Medical requirements:

- a. Vision:** Normal color vision
- b. Hearing/Speech:** Normal hearing and speech
- c. Other:** Manual dexterity.

3. IAAFA entrance examinations:

- a. General aptitude:** N/A
- b. Mechanical aptitude:** Minimum score of 20
- c. Mathematics aptitude:** Minimum score of 20
- d. Electronics aptitude:** Minimum score of 25

4. Uniform/Equipment: In addition to the uniforms requirements listed in the General Clothing Requirements on page 4, non-conductive plastic eyeglass frames are mandatory for students who wear eyeglasses.

***Summary of Changes:**

- **Block I:** Hours adjusted from 66 to 31.5
- **Block II:** Hours changed from 84 to 67.5
- **Block III:** Block III is new to course. Total hours are 51.0

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NICKEL-CADMIUM BATTERY TECHNICIAN**2 WEEKS****MASL D141244****STUDENT LOAD: MIN: 2 MAX: 6****COURSE OBJECTIVE**

This course provides special training on the principles, procedures, and safety precautions necessary to repair and maintain aircraft nickel-cadmium batteries with minimal help in a battery shop. Students are required to pass a written and or performance test at the end the block.

COURSE DESCRIPTION**BLOCK I – NICKEL-CADMIUM BATTERIES**

Students learn safety principles, battery shop safety equipment familiarization, and appropriate technical order usage. The characteristics, construction, and advantages of Nickel-Cadmium batteries are explored. The following procedures are accomplished: inspection, cleaning, capacitance check, and cell equalization. After sufficient practice, students are evaluated in the performance of current leakage and electrolyte level checks.

PREREQUISITES

1. Eligibility requirements: Open to all enlisted, officers, and/or civilian equivalents. Student must have completed MASL D141254 or have at least two years of practical experience in the field.

2. Physical/Medical requirements:

- a. Vision:** Normal and color vision
- b. Hearing/Speech:** Normal hearing and speech.
- c. Other:** Individual must lift a minimum of 50 pounds.

1. IAAFA Entrance examinations: N/A

- a. General aptitude: N/A**
- b. Mechanical aptitude: N/A**
- c. Mathematics aptitude: N/A**
- d. Electronics aptitude: N/A**

4. Uniform/Equipment: In addition to the uniforms requirements listed in the General Clothing Requirements on page 4, non-conductive plastic eyeglass frames are mandatory for students who wear eyeglasses.

*** Summary of Changes:** This course was previously referred to as **NICAD Battery**

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AIRCRAFT AND SYSTEMS TRAINING COURSES

FIRST LEVEL COURSES**AIRCRAFT MAINTENANCE OFFICER****10 WEEKS****MASL 141243-02****STUDENT LOAD: MIN: 4 MAX: 12***** COURSE OBJECTIVE**

This course prepares selected officers for aircraft maintenance leadership and management positions by giving them the tools and training in the essential areas of the maintenance career field. The curriculum provides maintenance management skills as well as organizational structures and management techniques used in the planning and developing of functional areas within a maintenance organization. The training received will increase the individual's knowledge and understanding of maintenance operations and increase their ability to manage at higher responsibility levels within a maintenance unit. Student officers should have experience in the maintenance career field and perform or will perform duties at squadron or equivalent level. Students are required to pass a written and or performance test at the end of certain blocks prior to advancement to the next block of instruction.

COURSE DESCRIPTION*** BLOCK I – ORIENTATION, SAFETY, OPERATIONAL RISK MANAGEMENT (ORM)**

This block begins with a course orientation, where students learn about the academy's policies, programs, and academic objective requirements. This block provides detailed lectures and discussions on maintenance safety doctrine, Supervisory Safety responsibilities and practices, and in-depth fundamentals of the ORM program. Concludes with a written exam.

BLOCK II – QUALITY ASSURANCE

This block provides the student with the fundamentals necessary to perform the Quality Assurance (QA) function. Subjects covered include: The role of QA and responsibilities in evaluating and assessing personnel proficiency (including the quality and effectiveness of training programs), equipment and aircraft condition, and the management of specific programs that ultimately increase mission effectiveness. The Quality Assurance Program (QAP) is designed as a flexible feedback system for maintenance leaders, supervisors, and workers. Students learn methods to detect negative trends, problems areas, inform and prepare reports of these problems, their likely causes, and possible corrective actions. Quality assurance inspection concepts include: different types of evaluations, inspections and observations that are in the QAP and the Product Improvement Program. Concludes with a written exam.

BLOCK III – TOTAL QUALITY MANAGEMENT

The objective of this lesson is for each student to know the evolution of quality and its principles. Students are introduced to quality approach practices and how they differ from other management styles. The student also learns the concept of quality principles and practices in today's military environment. It also provides the student with comprehension on team dynamics and how to apply team leader skills to manage a successful team. They also have the opportunity to use selected decision tools enhancing continuous improvement efforts, as well as selected data and problem analysis tools. Concludes with a written exam.

*** BLOCK IV – TECHNICAL ORDER SYSTEM**

The student will learn the purpose, authority, and use of the USAF technical manual system, numbering system and filling technical orders. The students are also introduced to the illustrated parts breakdowns. Concludes with a written exam.

*** BLOCK V – SUPERVISORY ON-THE-JOB TRAINING**

The student is exposed to the On-the-Job-Training Program. The students learn the structure of the program and responsibilities to the training program. It also teaches supervisors how to plan, conduct, evaluate and document training. Concludes with a written exam.

*** BLOCK VI – SUPERVISORY MANAGEMENT**

Students learn wing programs and operational support. This is a key element in understanding the communication within the operations and maintenance units. Students also define and compare the organization and responsibilities of maintenance managers and sortie production units with reference to Air Force major commands' guidance. Students learn the definition of maintenance practices within a sortie production unit and maintenance management philosophy and policies. Concludes with a written exam.

*** BLOCK VII – MAINTENANCE MANAGEMENT**

Students are introduced to the USAF maintenance staff agencies and their management practices and responsibilities. These will include: organizational structure and specific responsibilities, development of an aircraft maintenance flying schedule (daily, weekly, monthly), to include scheduled and unscheduled maintenance requirements, preventive maintenance and inspections, and sortie generation and contingency response. The student also learns the purpose and application of maintenance indicators to develop and maintain a flying schedule and identify operations and maintenance functions in emergency and contingency situations. Students are afforded the opportunity in the classroom to apply knowledge and skills enabling them to perform the required tasks; students are to complete an aircraft generation exercise. Concludes with a written exam.

BLOCK VIII – ORGANIZATION STRUCTURE AND LOGISTICS

Students are introduced to the USAF structure and logistic support. Students will develop an understanding of the supply and maintenance relationship and their responsibilities, where they can identify the repair cycle and assets. They will also identify the national material classification system elements of data used in the supply system. Concludes with a written exam.

PREREQUISITES

- 1. Eligibility requirements:** Selected Officers and civilian equivalents, which perform or will perform aircraft maintenance officer duties.
- 2. Physical/Medical requirements:**
 - a. Vision:** Normal vision (20/20 with or without glasses) Normal color vision.
 - b. Hearing/Speech:** Normal hearing
 - c. Other:** Normal manual dexterity
- 3. IAAFA Entrance examinations:**
 - a. General aptitude:** Minimum score of 21
 - b. Mechanical aptitude:** N/A
 - c. Mathematics aptitude:** N/A
 - d. Electronics aptitude:** N/A
- 4. Uniform/Equipment:** None, other than those mentioned in the General Clothing Requirements on page 4.

Summary of Changes:*Course Objective**

The course objective was changed to enhance and provide maintenance officers with the adequate managerial skills and the understanding of the organizational structures and management techniques used in the planning and developing of functional areas within a maintenance organization. This objective will increase the individual's knowledge and understanding of maintenance operations and increase their ability to manage at higher responsibility levels within a maintenance unit resulting in meeting and surpassing their mission requirements. Several blocks were rearranged in order to give flow to this objective, but have no internal change.

Block I

As a main responsibility of a maintenance officer safety doctrine was added. The block will provide detailed lectures and discussions in the maintenance field and safety issues. The Operational Risk Management is discussed in-depth. The student will also have the opportunity to understand the development and implementation of a solid safety program, allowing risk free environment and saving resources and protecting there personnel in and out of the job environment.

Block VI

This block allows students to understand the relationship of the wing structure, its programs, management and responsibilities related to aircraft generation, the key element is to understand the importance of the communication within the operations and maintenance units. How missions are developed and why is the importance in meeting major command requirements. Definitions of maintenance practices within a sortie generation production unit and maintenance management philosophy and policies are also an important factor that a maintenance officer must understand to ensure proper mission requirements are met.

Block VII

This block introduces the maintenance staff agencies that assist and assess the maintenance functions. It also includes aircraft planning and specific responsibilities in developing a flying schedule and scheduled and unscheduled maintenance requirements to meet flying requirements. Preventive maintenance, inspections, sortie generation and contingency response requirements. Maintenance indicators are also included within this block; students will understand the purpose and application of maintenance indicators in order to maintain and identify operational and maintenance functions within their units.

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AIRCRAFT PNEUDRAULICS SYSTEMS TECHNICIAN**12 WEEKS****MASL D141247-01****STUDENT LOAD: MIN: 3 MAX: 12****COURSE OBJECTIVE**

This course provides training in the fundamentals of pneudraulics at the apprentice level to enable students to become proficient on hydraulic and pneumatic principles, system theory, hydraulic system and subsystem operation, on-aircraft troubleshooting techniques and related system support equipment. Students are required to pass a written and or performance test at the end of certain blocks prior to advancement to the next block of instruction.

COURSE DESCRIPTION**BLOCK I – FUNDAMENTALS AND PUBLICATIONS**

This block begins with a course orientation, where students learn about the academy's policies, programs, and academic objective requirements. Instruction is provided on ground, back-shop, and flight line safety. Students learn the principles of flight, hydraulics, and pneumatics. They will also receive instruction on solving equations pertaining to basic pneudraulics principles, detailed instructions on the use of technical orders, as well as maintenance manuals and illustrated parts breakdown.

BLOCK II – TOOLS AND AIRCRAFT HARDWARE

This block provides necessary information on the proper selection and care of hand tools and detailed instruction on the use of torque wrenches, calipers, and micrometers, allowing students to determine allowable tolerances of components. Students will receive instruction on safety devices and demonstrate proper safety procedures, learn to identify hydraulic fittings, seals, hydraulic fluids and lubricants used on aircraft pneudraulics systems. Additionally, students will fabricate a medium pressure hose assembly.

BLOCK III – MAINTENANCE EQUIPMENT

Block III provides students with the fundamentals and operation of shop equipment, aircraft jacks and maintenance stands. They learn to interpret support equipment schematics on the MJ-1-1 hydraulic test stand and MC-1A air compressor. They also learn to operate and adjust an MJ-1-1 hydraulic test stand to support aircraft hydraulic systems and sub-systems operational checkouts. Instruction is also provided on the operation of the MC-1A air compressor. Finally, students will operate and adjust pressure output to service aircraft pneumatic systems.

BLOCK IV – BASIC COMPONENTS OF A HYDRAULIC SYSTEM

This block concentrates on the description and theory of operation of basic hydraulic system components. Items covered in the block include: hydraulic reservoirs, hydraulic pumps, pressure regulators, filters, accumulators, and selector valves. Students will arrange components in the required sequence to properly build an operable hydraulic system. They are instructed in the operation of an opened and closed center hydraulic system. They will also learn proper servicing procedures of aircraft hydraulic reservoirs. Troubleshooting and inspection techniques are covered and students will use techniques learned to diagnose common malfunctions on hydraulic systems, pressure regulators and accumulators.

BLOCK V – SUBSYSTEM COMPONENTS

During this block students will learn to use schematics and state the purpose of control valves; explain the operation of a hydraulic fuse, flow regulator, and a hydraulic flow equalizer. They will explain the purpose and operation of a pressure-reducing valve, methods for controlling sequencing valves and hydraulic system sequencing, as well as calculate three pressure settings for relief valves, and explain the operation of a hydraulic motor and how mechanical forces are developed. They will learn general procedures to overhaul and inspect a double-acting unbalance of actuating cylinders.

BLOCK VI – OPERATION OF PNEUDRAULIC SYSTEM AND SUBSYSTEMS

Using schematics, students will learn the theory of operation of the A-37 hydraulic system and subsystems. They will perform an operational check of the hydraulic system and subsystems. Students will perform an operational check of the hydraulic system and the landing gear sub-system of the A-37B aircraft. This block also covers the theory of operation of the C-130 landing gear hydraulic sub-system; the C-130 landing gear mock-up is used to demonstrate retraction and extension of the gear. They will also receive instruction on the system and subsystem arrangement and operations. Students will describe and perform functional checks of the primary flight control system using the C-130 mock-up and perform a functional check of the secondary flight control system of an A-37B aircraft.

BLOCK VII – SHOCK ABSORBING DEVICES AND BRAKE SYSTEMS

This block covers construction of the landing gear shock struts and servicing procedures. Students learn general procedures for disassembly, inspection and reassembly of a shimmy damper, perform an operational check of a nose wheel steering sub-system, and explain the operation of each sub-system. Instruction is also provided on the independent power boost brakes and slave brake sub-systems. They will learn general bleeding procedures for independent brake systems and brake boost and power brake sub-systems.

BLOCK VIII – WHEEL BRAKE ASSEMBLIES

Students will learn component breakdown and operation of the shoe, multiple discs, segmented rotors and spot disc brake assemblies. Students will identify segmented rotor brake components and their common malfunctions.

PREREQUISITES

1. Eligibility requirements: This course is structured for all aircraft technicians that are required to accomplish maintenance on pneudraulics system. Open to enlisted, officers and civilians.

2. Physical/Medical requirements:

- a. **Vision:** Normal color vision
- b. **Hearing/Speech:** Normal hearing
- c. **Other:** Normal manual dexterity

3. IAAFA entrance examinations:

- a. **General aptitude:** Minimum score of 20
- b. **Mechanical aptitude:** Minimum score of 20
- c. **Mathematics aptitude:** Minimum score of 20
- d. **Electronics aptitude:** N/A

4. Uniform/Equipment: None, other than those mentioned in the General Clothing Requirements on page 4.

*** Summary of Changes:** N/A

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AIRCRAFT MAINTENANCE SUPERINTENDENT**10 WEEKS****MASL 141249-01****STUDENT LOAD: MIN: 4 MAX: 12****COURSE OBJECTIVE**

This course prepares experienced senior non-commissioned officers, selected junior officers, and civilian equivalents to perform supervisory duties and assume a greater leadership role within a maintenance complex. Additionally it provides information on organizational structure and management techniques used in the planning and developing of functional areas within a maintenance organization. The training received will increase the individual's knowledge and understanding of maintenance operations and increase their ability to function as a senior maintenance supervisor. Students are required to pass a written and or performance test at the end of each block prior to advancement to the next block of instruction.

COURSE DESCRIPTION**BLOCK I – ORIENTATION, SAFETY, OPERATIONAL RISK MANAGEMENT (ORM)**

This block begins with a course orientation, where students learn about the academy's policies, programs, and academic objective requirements.. This block provides detailed lectures and discussions on maintenance safety doctrine, supervisory safety responsibilities and practices, in-depth fundamentals concepts of the Organizational Risk Management (ORM) program.

BLOCK II – QUALITY ASSURANCE

This course also provides the student with the fundamentals necessary to perform the quality assurance function. Subjects covered include: In depth fundamentals concepts to the ORM program, Safety Analysis and Inspections, the role of QA and responsibilities in evaluating and assessing personnel proficiency (including the quality and effectiveness of training programs), equipment and aircraft condition, and the management of specific programs that ultimately increase mission effectiveness. The Quality Assurance Program (QAP) is designed as a flexible feedback system for maintenance leaders, supervisors, and workers. Students learn methods to detect negative trends, problems areas, inform and prepare reports of these problems, their likely causes, and possible corrective actions. Quality assurance inspection concepts include: different types of evaluations, inspections and observations that are in the QAP.

BLOCK III – TOTAL QUALITY MANAGEMENT

The objective of this lesson is for each student to know the evolution of Quality and its principles. Students are introduced to quality approach practices and how they differ from other management styles. The student also learns the concept of quality principles and practices in today's military environment. It also provides the student with comprehension on team dynamics and how to apply team leader skills to manage a successful team. They also have the opportunity to use selected decision tools enhancing continuous improvement efforts, as well as selected data and problem analysis tools.

BLOCK IV – TECHNICAL ORDER SYSTEM

Students learn the purpose, authority, and use of the USAF technical manual system, and illustrated parts breakdowns. Interpret and select the proper technical data.

BLOCK V – SUPERVISORY ON-THE-JOB TRAINING (OJT)

The student is exposed to the On-the-Job-Training Program. The students learn the structure of the program and responsibilities to the training program. It also teaches supervisors how to plan, conduct, evaluate and document training.

BLOCK VI – WEIGHT AND BALANCE

Students are introduced to the tremendous importance of knowing weight and balance concepts in aircraft maintenance operations. Students learn and perform mathematical formulas used to calculate aircraft weight changes, practical exercises, proper forms documentation, technical data, familiarization with weighing scales, and the actual weighing of an aircraft.

BLOCK VII – SUPERVISORY MANAGEMENT

Students are provided with working knowledge of the principles and techniques of effective personnel management to include: supervisory responsibilities, the management process, effective leadership, individual behavior, human relations, effective communication, problem solving and counseling. Emphasis is on practical application of new supervisory skills.

BLOCK VIII – MAINTENANCE AND STAFF AGENCY SQUADRONS

Students are introduced to the USAF maintenance staff agencies and their management practices and responsibilities. These will include: organizational structure and specific responsibilities, development of an aircraft maintenance flying schedule (daily, weekly, monthly), to include scheduled and unscheduled maintenance requirements, preventive maintenance and inspections. The student also learns the operation and concept of engine management, joint oil analysis system, foreign object programs, logistic structure repair cycle (parts/equipment), and the material classification system.

PREREQUISITES

1. Eligibility requirements: Senior Non-Commissioned Officers, selected Junior Officers and civilian equivalents, which performs or will perform maintenance supervisory duties. Suggested ranks for attendance are MSgt and above and highly qualified select Junior Officers and rated civilians and above.

2. Physical/Medical requirements:

- a. Vision:** Normal color vision.
- b. Hearing/Speech:** Normal hearing
- c. Other:** Normal manual dexterity

3. IAAFA Entrance examinations:

- a. General aptitude:** Minimum score of 21
- b. Mechanical aptitude:** N/A
- c. Mathematics aptitude:** N/A
- d. Electronics aptitude:** N/A

4. Uniform/Equipment: None, other than those mentioned in the General Clothing Requirements on page 4.

*** Summary of Changes:** N/A

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AEROSPACE GROUND EQUIPMENT TECHNICIAN**12 WEEKS****MASL D141250-01****STUDENT LOAD: MIN: 3 MAX: 10****COURSE OBJECTIVE**

This course provides fundamental skills and knowledge to perform checks, service inspections, troubleshooting, general maintenance, maintenance, and repair of powered support equipment at an apprentice skill level. Additionally, students learn the proper use of common and special tools and test equipment. Students are required to pass a written test at the end of each block and performance checks at the end of certain blocks prior to advancement to the next block of instruction.

COURSE DESCRIPTION*** BLOCK I – FUNDAMENTALS**

Block I begins with a course orientation in which students learn about the academy's policies and procedures along with academic objective requirements. The students are taught in a hands-on environment on proper use and care for technical orders, hand tools, torque wrenches, and proper safety wiring techniques.

*** BLOCK II – BASIC ELECTRICITY**

In block II, students receive instruction on the principles of atomic structure, magnetism, current, voltage, resistance, wattage, Ohm's Law, electrical symbols and resistive circuits. They will apply this knowledge to test and troubleshoot electric circuits in Blocks IV, V, VI, VII, and VIII. They will also learn to interpret wiring diagrams and schematics, AC and DC generator principles, as well as AC and DC motors.

***BLOCK III – DIESEL ENGINES**

In Block III, students will receive instruction on 2 and 4 cycle diesel engines. They are taught in detail component function, description, and operational fundamentals of the diesel engine, also receive instruction in fundamentals of fuel, lubrication, cooling, and airflow induction systems.

***BLOCK IV – A/M32A-86D DIESEL GENERATOR SET**

In Block IV, students will learn the diesel generator set capabilities, service inspection, and testing of the unit. They are taught component location, functions, and electric schematic diagrams with emphasis placed on electrical system troubleshooting.

***BLOCK V – A/M32A-60 GAS TURBINE COMPRESSOR (GTC) GENERATOR**

Block V is geared towards the use and understanding of the GTC; here students learn the operational fundamentals of the GTC, engine, electrical system and components, and operation of the GTC. Students will learn the fundamentals of the service inspection, pre-operational inspections, and component location. This block contains a detailed explanation of electric schematic diagrams and troubleshooting techniques.

***BLOCK VI – MC-1A AIR COMPRESSOR**

Block VI starts with the principles of reciprocating piston compressors. Students will learn description and function of components, pre-operational inspections, and operational checks of MC-1A air compressor. Air flow system is taught, to include system purpose, safety valves, air cooler, and clutch adjustment. Wiring diagrams and troubleshooting procedures are also covered in this block of instruction.

***BLOCK VII – MJ-1-1 HYDRAULIC TEST STAND**

This block consists of hydraulic principles of commonly used hydraulic system components and specific hydraulic systems of the MJ-1-1. Here students are taught principles that can be applied to all hydraulic test stand systems. Specific instruction is given on the flow diagram, function of components, pre-operation inspection, operation, and electrical diagram of the MJ-1-1 hydraulic test stand.

***BLOCK VIII – BOMB LIFT**

Students will learn the operational fundamentals and operational checks of the MJ-1B bomb-lift. Specific instruction is given on the Hatz Diesel engine, transmission, hydraulic fluid flow, and electrical diagram.

PREREQUISITES

- 1. Eligibility requirements:** Open to all enlisted, officers, and/or civilian equivalents.
- 2. Physical/Medical requirements:**
 - a. Vision:** Normal color vision
 - b. Hearing/Speech:** Normal hearing
 - c. Other:** Normal manual dexterity
- 3. IAAFA entrance examinations:**
 - a. General aptitude:** Minimum score of 20

b. Mechanical aptitude: Minimum score of 25

c. Mathematics Aptitude: Minimum score of 20

d. Electronics aptitude: Minimum score of 20

4. Uniform/Equipment: None, other than those mentioned in the General Clothing Requirements on page 4.

*** Summary of Changes:** Block names and unit titles changed to reflect course conversion. Requirements for student to pass the course were also updated.

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AIRCRAFT TECHNICIAN**12 WEEKS****MASL D141251-01****STUDENT LOAD: MIN: 4 MAX: 12****COURSE OBJECTIVE**

This course trains aircraft maintenance technician apprentices on operational principles and theory of ground safety, aircraft systems and sub-systems, component description and operation, aircraft ground handling, inspection, servicing procedures, and operation of aerospace ground equipment. The course provides aircraft familiarization to personnel with assignments to heavy aircraft (bombers, tankers, and airlift) and/or light aircraft (fighters, trainers, and attack). Students are required to pass a written and or performance test at the end of certain blocks prior to advancement to the next block of instruction.

COURSE DESCRIPTION**BLOCK I – FAMILIARIZATION**

This block begins with a course orientation, where students learn about the academy's policies, programs, and academic objective requirements. Students learn the principles of safety, accident prevention, and aircraft ground safety procedures on the flight line. Students also learn how to interpret, identify, and select technical data, and the use and purpose of aircraft forms documentation and filing. Additionally, students learn the aircraft inspection system, levels of maintenance inspection, types of inspections, and identification and purpose of aircraft hardware.

BLOCK II – AIRCRAFT GENERAL

Students learn the variety of airframe structures, reference datum numbering and aircraft markings. They are taught aircraft ground handling, marshalling procedures, parking, towing, mooring, and jacking. Students also learn the principles and use of non-powered ground support equipment, and operation of powered ground support equipment. They receive instruction on corrosion control and prevention programs, care of aircraft, and aircraft safe for maintenance. Students also receive a diversity of training on several types of egress systems.

BLOCK III – ELECTRICAL SYSTEM

Students learn the operational concepts and theory of electricity, circuits, and components. They learn identification and inspection procedures of the direct current systems; identification and inspection procedures of the alternate current systems, aircraft lighting systems, and operation of aircraft fire and overheat warning systems.

BLOCK IV – UTILITY SYSTEMS

Students learn the fundamental principles, components, theory of operation, and inspection procedures of the bleed air system, air-conditioning and pressurization systems, fire extinguisher and anti-icing and de-icing systems. Additionally, the operation of the liquid and oxygen system, servicing procedures, and the inspection procedures of the utility systems are discussed.

BLOCK V – PNEUDRAULICS SYSTEM

Students learn the aircraft pneudraulics systems, components, and operation. Students learn the aircraft's landing gear, inspection, components, and operational checks of the system. Removal and installation of wheel/tire and brake system assembly is also taught during this block of instruction.

BLOCK VI – FLIGHT CONTROL SYSTEM

The students learn theory and principles of flight. They identify and state the purpose of the primary and secondary flight control surfaces and components. Students also learn fundamentals of inspections, rigging, and procedures for removal and installation of flight control surfaces.

BLOCK VII – FUEL SYSTEMS

Students learn the fundamentals of the fuel system, inspection procedures and safety precautions, components and operation of the internal and external fuel system, and inspection and servicing procedures.

BLOCK VIII – ENGINE AND SYSTEMS

Students learn the engine technical terminology on several types of engines. They learn major engine sections, and components of jet engines and turbo propeller engines. They also learn principles of operation, inspection and component location, and subsystems. This block also covers the introduction and description of the Hamilton standard propeller.

PREREQUISITES

- 1. Eligibility Requirements:** Open to all enlisted, officers, and/or civilians equivalent
- 2. Physical/Medical requirements:**
 - a. Vision:** Normal color vision
 - b. Hearing/Speech:** Normal hearing
 - c. Other:** Normal manual dexterity

3. IAAFA entrance examinations:

- a. General aptitude:** Minimum score of 20
- b. Mechanical aptitude:** Minimum score of 15
- c. Mathematics aptitude:** N/A
- d. Electronics aptitude:** N/A

4. Uniform/Equipment: None, other than those mentioned in the General Clothing Requirements on page 4.

*** Summary of Changes:** N/A

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ENGINE TECHNICIAN (APPRENTICE)**12 WEEKS****MASL 141255-01****STUDENT LOAD: MIN: 3 MAX: 12****COURSE OBJECTIVE**

This course combines engine operational theory with hands-on maintenance training. The operational theory includes engine component description and operation, engine systems, and flight line and in-shop maintenance. Students will also learn how to use electrical schematics to troubleshoot various engine systems. Flight line and in-shop maintenance training includes engine removal, inspection, and installation procedures. Students are required to pass a written and or performance test at the end of certain blocks prior to advancement to the next block of instruction.

COURSE DESCRIPTIONS**BLOCK I – FUNDAMENTALS**

This block begins with a course orientation, where students learn about the academy's policies, programs, and academic objective requirements. Students learn the principals of safety, accident prevention, and aircraft ground safety procedures on the flight line. Training objectives included in this block are: description of engine hardware, safety devices, proper use of hand-tools and precision measuring tools, and proper use of engine technical orders. This block of instruction culminates with engine maintenance support equipment and is measured with a written examination.

BLOCK II – ENGINE FAMILIARIZATION

Students learn technical terminology on several types of engines. The block begins with the major engine sections, components, and differences between jet engines and turbo propeller engines. Learning the principles of operation, inspection, and component location, and their respective subsystems is accomplished in detail. The description of major engine sections is discussed thoroughly. Engine bearing familiarization and engine instruments operation are the objectives in this unit of instruction. The use of technical manuals is stressed throughout the course. A comprehensive written examination concludes this block of instruction.

BLOCK III – ENGINE SYSTEMS FAMILIARIZATION

The focus of the third block of instruction is the description and operation of various types of engine systems. The instructor demonstrates operation of fuel, oil, air, and electrical systems components. Under the air systems unit, students learn engine de-icing and anti-icing principles. The observance of technical procedures and safety regulations is highly stressed. Student evaluations consist of progress checks throughout all performance tasks. A final written examination is administered at the end of the block.

BLOCK IV – ENGINE MAINTENANCE

General engine maintenance procedures are the focal purpose of this block of instruction. Students learn to remove, replace and inspect several engine accessories. During this block, students will perform an engine removal and installation. Additionally, students will inspect the engine hot section using both flexible and fixed type borescope. A comprehensive written evaluation is administered at the end of the block.

BLOCK V – FLIGHTLINE AND IN-SHOP MAINTENANCE

This final block of instruction is geared towards developing engine-troubleshooting techniques. The instructor demonstrates real scenarios and the use of different engine testing equipment. The student learns detailed engine inspection procedures, proper engine storage and preservation. Throughout this block, students combine knowledge from previous units to solve and find solutions to different engine fault scenarios. This block of instructions finalizes with a written examination and course assessment.

PREREQUISITES

1. Eligibility requirements: This course is designed for new engine technicians and technicians with one to two years of engine maintenance experience.

2. Physical/Medical requirements:

- a. Vision:** Normal color vision
- b. Hearing/Speech:** Normal hearing
- c. Other:** Normal manual dexterity

3. IAAFA entrance examinations:

- a. General aptitude:** Minimum score of 15
- b. Mechanical aptitude:** Minimum score of 15
- c. Mathematics aptitude:** N/A
- d. Electronics aptitude:** N/A

4. Uniform/Equipment: None, other than those mentioned in the General Clothing Requirements on page 4.

*** Summary of Changes:** N/A

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AIRCRAFT STRUCTURAL MAINTENANCE TECHNICIAN**12 WEEKS****MASL D141396-01****STUDENT LOAD: MIN: 4 MAX: 12****COURSE OBJECTIVE**

This course is designed to prepare the aircraft technician for the responsibilities and duties at an apprentice level in the aircraft structural maintenance career field. Students will learn to use tools ranging from basic hand tools to specialized tools. This course teaches them to repair, modify, and fabricate aircraft metal components and assemblies. They will also learn the theory of corrosion and to form a better understanding about common aircraft metals. Finally, students will learn the fundamentals of painting aircraft parts. Students are required to pass a written and or performance test at the end of certain blocks prior to advancement to the next block of instruction.

COURSE DESCRIPTION**BLOCK I – FUNDAMENTALS**

This block begins with a course orientation, where students learn about the academy's policies, programs, and academic objective requirements. Students are given an introduction to safety doctrine and practices. They will learn the characteristics and identification of common aircraft metals. Students learn shop mathematics, how to interpret technical drawings, and tool control. Students initially learn how to use simple tools such as: rulers, scribes, and dividers to develop metal layouts and cut them with non-powered equipment. Lastly, the student will use the same metal layouts to learn how to make different types of sharp bends.

BLOCK II – FABRICATION OF AIRCRAFT PARTS

In block II, students will learn about setback and bend allowance-using tables and charts to calculate the minimum and maximum radius bends that can be accomplished. They will also fabricate a Simulated Aircraft Structure (SAS) utilizing their knowledge. Afterwards, they will learn to form a metal part by hand then by machine forming.

BLOCK III – PREPARATION FOR STRUCTURAL ASSEMBLY

During block III structural assembly preparation, students advance and begin to use powered equipment and tools. They learn about the power shear and band saw and how they are used to cut out sheet metal. Rivet identification, rivet pattern and rivet layout is taught followed by pneumatic drilling, countersinking, and dimpling holes using the SAS.

BLOCK IV – CORROSION PREVENTION AND STRUCTURAL ASSEMBLY

The students learn about technical orders and the principle of corrosion affecting common aircraft metals. They learn about hazardous materials and the importance of shelf life program for chemicals. The students learn about spray guns, spray pattern defects, chemical preservation, and application of primer on the SAS. The student is taught pneumatic riveting on the SAS. A protective coating is applied to the SAS.

BLOCK V – AIRCRAFT STRUCTURAL REPAIR

The students learn about classifying damage and stop-drilling cracks. They also learn about coating and corrosion removal. Lastly, they apply non-flush repair and a combination repair on the completed SAS.

BLOCK VI – SPECIAL ASSEMBLIES

In the final block of instruction students learn about the most common hardware and fasteners used on aircraft. They will also learn how to manufacture aircraft tubing assemblies. The course concludes with a section on aircraft cables.

PREREQUISITES

- 1. Eligibility requirements:** Open to all enlisted, officers, and/or civilian equivalents.
 - 2. Physical/Medical requirements:**
 - a. Vision:** Normal vision
 - b. Hearing/Speech:** Normal hearing with no speech impediments
 - c. Others:** Normal manual dexterity, Non-expecting women
 - 3. IAAFA entrance examinations:**
 - a. General aptitude:** Minimum score of 15
 - b. Mechanical aptitude:** Minimum score of 20
 - c. Mathematics aptitude:** Minimum score of 20
 - d. Electronics aptitude:** N/A
 - 4. Uniform/Equipment:** None, other than those mentioned in the General Clothing Requirements on page 4.
- * Summary of Changes:** N/A

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HELICOPTER CREW CHIEF**12 WEEKS****MASL D141257-01****STUDENT LOAD: MIN: 5 MAX: 10****COURSE OBJECTIVE**

This course teaches students at the apprentice level fundamental elements of inspection, servicing, functional checks, preventive maintenance, and component familiarization and function on rotary type aircraft and related equipment. Students are required to pass a written and or performance test at the end of certain blocks prior to advancement to the next block of instruction.

COURSE DESCRIPTIONS**BLOCK I – GENERAL SUBJECTS**

This block begins with a course orientation, where students learn about the academy's policies, programs, and academic objective requirements. Students are given an introduction to safety doctrine and practices. They are taught the importance of ground safety and its affects on the maintenance activity with emphasis on awareness and compliance. The student will also learn how to identify and properly use maintenance manuals and other reference materials. In addition, the student will learn about the responsibilities of the helicopter maintenance organization and the different levels of supervision. Students are also instructed on how to perform different types of preventive maintenance procedures, required inspections, and documentation.

BLOCK II – GENERAL HELICOPTER MAINTENANCE

During this block of instruction the student is taught how to properly identify and use common and special tools. Students will learn to identify different types of aircraft hardware and aircraft tubing and hoses according to their color-coded decals. This block will teach the student how to correctly select and install safety devices. The purpose, operation, and safety for different types of powered and non-powered ground support equipment are taught during this block. The student learns to recognize and treat different types of corrosion and the procedures for corrosion control. Helicopter ground handling is also included in this block. The students learn hand signals and proper towing procedures. Step by step refueling and de-fueling procedures are discussed during this block. The student will remove, inspect and install the helicopter main landing gear. Students are familiarized with the theory and construction of the UH-1 helicopter.

BLOCK III – HELICOPTER SYSTEMS

This block will familiarize students with the fundamental theory of operation, purpose, and component location of helicopter systems to include hydraulic, electrical, instruments, utility, and fuel systems. Through schematics students are able to visualize the entire flow of these systems and

learn the functions of various valves and pumps located within them. They will also learn the identification of different instruments and the meaning of range markings.

BLOCK IV – HELICOPTER POWERPLANT

This block provides students with the operating principles of jet engines. It highlights and compares the T-53-L-13B engine theory to other known turbine engines. Students are taught the theory of operation for each T-53 engine system. This block also teaches the proper removal and procedure for installation of the T-53 engine.

BLOCK V – MAIN AND TAIL ROTOR SYSTEMS

This block begins by familiarizing students with different types of main rotors and their major components. Students will remove the stabilizer bar, main rotor, and blades from a UH-1H helicopter. They will learn the procedures for the stabilizer bar damper check. Familiarization with the tail rotor system is also taught within this block. Students will remove and install the tail rotor, and the pitch change mechanism is discussed. Students are then taught about helicopter vibrations and its affects in flight.

BLOCK VI – POWER TRAIN SYSTEM

This block is designed to familiarize students with information about the helicopter power train system. Students will remove and install the main transmission and all its major components. The removal and installation of the tail rotor drive shafts, hanger bearing assemblies, and 42 degree and 90 degree gearboxes are also accomplished during this block. In this block the students will install the stabilizer bar, main rotor, and blades as these components were removed prior to removing the main transmission.

BLOCK VII – FLIGHT CONTROL SYSTEM

During this last block students are familiarized with the purpose and functions of helicopter flight controls. Students will perform actual rigging procedures on flight controls to include the collective, cyclic, tail rotor, and synchronized elevator systems.

PREREQUISITES

1. Eligibility requirements: This course is open to military or civilian personnel entering the helicopter maintenance field.

2. Physical/Medical requirements:

- a. Vision:** Normal color vision
- b. Hearing/Speech:** Normal hearing
- c. Other:** Normal manual dexterity

3. IAAFA entrance examinations:

- a. General aptitude:** Minimum score of 15
- b. Mechanical aptitude:** Minimum score of 15
- c. Mathematics aptitude:** N/A
- d. Electronics aptitude:** N/A

4. Uniform/Equipment: No special uniforms or equipment are required other than those mentioned in the General Clothing Requirements on page 4.

***Summary of changes:** N/A

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CORROSION CONTROL TECHNICIAN**6 WEEKS****MASL D141282-01****STUDENT LOAD: MIN: 4 MAX: 10****COURSE OBJECTIVE**

This course is designed to train maintenance personnel in the fundamentals of corrosion control. Students learn procedural requirements for the detection, prevention, and treatment of corrosion on aircraft and equipment. Focus is placed on safety, proper technical order usage, and surface preparation. Finally, students will learn the fundamentals of painting aircraft parts. Students are required to pass a written and performance progress checks at the end of each block prior to advancement to the next block of instruction.

COURSE DESCRIPTION**BLOCK I – FUNDAMENTALS**

This block begins with a course orientation, where students learn about the academy's policies, programs, and academic objective requirements. They will learn the fundamentals of ground safety, personal protection, fire prevention, use and storage of chemicals. Students are taught how to identify and use technical orders. Students will learn of the environmental impact of improper corrosion control practices. They will discuss the characteristics of metals. Additionally, students will learn the factors, types of corrosion, and the effects of corrosion on all aircraft structural surfaces.

BLOCK II – CORROSION REMOVAL AND SURFACE TREATMENT

Cleaning methods are explained and taught according to technical orders. Students are taught treatment of metals, inspection techniques and corrosion removal procedures using mechanical and chemical methods. Additionally, students will discuss the correct procedures and methods of storage and disposal of chemicals.

BLOCK III – APPLICATION OF COATINGS

Students will learn about the compatibility and composition of coatings. They will practice the care and correct usage of painting equipment along with the latest painting techniques. Finally, according to technical order procedures students will apply polyurethane coating on training parts.

PREREQUISITES

1. Eligibility requirements: Open to all personnel enlisted, officers, and civilians who have completed as a minimum the Aircraft Structural Maintenance Technician Course (MASL D141396) or 2 years of practical experience in the airframe repair field.

2. Physical/ Medical requirements:

a. Vision: Normal vision with or without glasses

b. Hearing/ Speech: Normal hearing

c. Others: Normal manual dexterity. Must not have any physical or medical condition that will prevent the wearing of a full-face respirator.

3. IAAFA entrance examinations:

a. General aptitude: Minimum score of 15

b. Mechanical aptitude: N/A

c. Mathematics aptitude: N/A

d. Electronics aptitude: N/A

4. Uniform/ Equipment: None, other than those mentioned in the General Clothing Requirements on page 4.

*** Summary of Changes:** The areas covered in each Block of instruction were changed to match the lesson plans. Pre-requisites for the course were updated. Requirement needed for the students to pass the course were also updated.

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ARMAMENT/MUNITIONS SYSTEMS TECHNICIAN**12 WEEKS****MASL D142072-01****STUDENT LOAD: MIN: 3 MAX: 10****COURSE OBJECTIVE**

This course is designed to teach students inspection and maintenance of the F-5 and A-37B aircraft weapon systems. Students learn procedures on inspection, maintenance, repair, and assembly of general-purpose bombs, flares and rockets. Instruction is given on inspection, assembly and checkout procedures of precision-guided munitions. Students learn functional checks of rocket launchers, flare dispensers, and procedures for loading and downloading bombs, rockets, and ammunition on aircraft. Finally, students perform operating procedures using munitions loading equipment. Students are required to pass a written and or performance test at the end of certain blocks prior to advancement to the next block of instruction.

COURSE DESCRIPTION**BLOCK I – ORIENTATION/FUNDAMENTALS**

This block begins with a course orientation, where students learn about the academy's policies, programs, and academic objective requirements. Next, students are taught the importance of ground and electrical safety, to include causes, preventive measures, electrical shock, and first aid procedures. Students learn and apply proper safety wire techniques, proper use of tools and torque wrenches, and proper use of the Air Force technical order system. Terminology and symbols used in electrical circuits are also explored during this block. Using digital and analog multimeters, students measure voltages, perform continuity checks on wiring harnesses, and repair electrical circuits using soldering and solderless techniques.

BLOCK II – AIR MUNITIONS

In block II students learn about explosive safety, military explosives, identification and assembly of small arms ammunition. In addition, students learn identification and inspection of LUU-2 illumination flares and pre-loading of the SUU-25 pyrotechnic dispenser. Assembly and configuration of general-purpose bombs, identification and configuration of M-904/M-905 bomb fuses are taught. The students assemble and perform resistance tests on 2.75" folding fin rockets and inspect LAU-3, LAU-68, and LAU-131 rocket launchers. Inspection, assembly, and performance checkout on an AIM-9 and the laser guidance package for a GBU-12 is accomplished.

BLOCK III – AIR MUNITIONS STORAGE

Students learn quantity-distance criteria, inspection and storage procedures for various munitions

storage structures. Inspection of munitions is covered during this block with emphasis on receiving, periodic, and pre-issue inspections. Additionally, students learn the types of storage criteria for different munitions, the purpose and use of quantity-distance tables, and corrosion control for different types of munitions.

BLOCK IV – F-5F AIRCRAFT ARMAMENT RELEASE, LAUNCH AND ARTILLERY SYSTEMS

During this block students receive instruction on the description and characteristics of the F-5F armament systems, and familiarization with the cockpit armament system controls using an armaments systems trainer. Disassembly, inspection, assembly and functional check of the MAU-50 and MAU-40 bombrack are also covered. Students learn the theory of operation and maintenance for the LAU-100 and 101 missile launchers that includes: upload and download of an AIM-9 missile on the aircraft. They will learn and practice the basic operation of the dispenser system on the F-5 system trainer. Finally, students learn how to remove, disassemble, reassemble, and install the M-39 20mm gun.

BLOCK V – A-37B AIRCRAFT ARMAMENT RELEASE, LAUNCH AND ARTILLERY SYSTEMS

In the final block of instruction, students learn the description and characteristics of the A-37B armament systems and familiarization with the cockpit armament system controls. They will also learn the purpose, identification, description of components, and maintenance requirements of the A-37B armaments control panel. Students remove, install, and functional check the MA-4 bombrack on the A-37B pylon. They learn to inspect and operate the MJ-1B diesel bomb lift and related loading equipment used to perform uploading and downloading procedures of the MK82 general-purpose bomb, SUU-25 flare dispenser, 2.75" rocket launcher, 2.75" rocket, B-37K-1 bomb container, and BDU-33 practice bomb. Fundamentals of the MAU-58A/A linkless ammunition handling system, of the GAU-2B/A (7.62mm) Gattling gun, and of the cockpit armament systems controls are taught. Students remove and install the MAU-58A/A system and the GAU-2B/A Gattling gun from the aircraft. Disassembly, inspection, maintenance, functional check, and gun system harmonization of the GAU-2 Gattling gun is performed. Finally, students learn procedures for the loading of ammunition in the MAU-58A/A system.

PREREQUISITES

- 1. Eligibility requirements:** Open to all enlisted, officers, and/or civilian equivalents.
- 2. Physical/Medical requirements:**
 - a. Vision:** Normal color vision
 - b. Hearing/Speech:** Normal hearing and speech.
 - c. Other:** Manual dexterity - lift over 50 Lbs "Clean & Jerk"

3. IAAFA entrance examinations

- a. General aptitude:** N/A
- b. Mechanical aptitude:** Minimum score of 20
- c. Basic mathematics:** N/A
- d. Electronics aptitude:** N/A

4. Uniform/Equipment: None, other than those mentioned in the General Clothing Requirements on page 4.

*** Summary of Changes:** N/A

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A-37 AIRCRAFT ADVANCED COURSES**A-37B JET AIRCRAFT TECHNICIAN****6 WEEKS****MASL D141264****STUDENT LOAD: MIN: 4 MAX: 10****COURSE OBJECTIVE**

The course is designed to provide an aircraft technician advanced operating principles and theory of the A-37B aircraft. Students will acquire extensive knowledge on analyzing facts and principles of the aircraft's systems and subsystems operation. Additionally, students learn troubleshooting techniques using technical manuals. Students are required to pass a written and or performance test at the end of certain blocks prior to advancement to the next block of instruction.

COURSE DESCRIPTION**BLOCK I – FUNDAMENTALS/SAFETY**

This block begins with a course introduction of the academy's policies and procedures. Students are given an orientation of the aircraft maintenance campus and academic objective requirements. Afterwards, students are provided detailed lectures and discussions on aircraft danger areas, ground safety, egress systems, weapons systems, and general aircraft familiarization. The students receive instruction on the use of technical orders, system schematics, troubleshooting charts, and weapons systems. Students are provided detailed lectures of the technical order system.

BLOCK II – AIRCRAFT SYSTEMS

In block II, students learn the identification and operational checks of the following: AC/DC electrical system, instruments, internal and external fuel systems, hydraulic and utility systems, and subsystems. Instruction is reinforced with the use of schematics, troubleshooting charts, and technical orders for each system and subsystem. Perform removal, installation and rigging on selected flight controls components. Performance/troubleshooting of operational checks on landing gear systems.

BLOCK III – GROUND HANDLING

Students learn how to identify and perform the aircraft maintenance inspections specific to the A-37B. Students also receive extensive hands-on experience on aircraft safe for maintenance and ground handling, aircraft jacking and towing procedures. The students also receive detailed instructions on the use of technical orders.

BLOCK IV – FLIGHTLINE MAINTENANCE

Students learn to identify and inspect systems of the A-37 using the applicable workcards. Students also learn theory of operation and component location of the fuel system.

BLOCK V - ENGINE AND ACCESSORIES

During the final block of instruction, students are introduced to the theory and operating principles of aircraft engine and engine subsystems. They will receive first hand experience on engine removal, inspection, and engine installation.

PREREQUISITES

1. Eligibility Requirements: The student must have completed as a minimum, an apprentice course (Aircraft Technician Course, MASL D 141251) or have two years of practical experience on fighter aircraft.

2. Physical/Medical requirements:

- a. **Vision:** Normal color vision
- b. **Hearing/Speech:** Normal hearing
- c. **Other:** Normal manual dexterity

3. IAAFA entrance examinations:

- a. **General aptitude:** Minimum score of 20
- b. **Mechanical aptitude:** Minimum score of 15
- c. **Mathematics aptitude:** N/A
- d. **Electronics aptitude:** N/A

4. Uniform/Equipment: None, other than those mentioned in the General Clothing Requirements on page 4.

*** Summary of Changes:** N/A

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J-85 ENGINE TECHNICIAN**10 WEEKS****MASL 141387****STUDENT LOAD: MIN: 3 MAX: 10****COURSE OBJECTIVE**

This course is designed to provide the engine specialist with advanced training on the J-85 engine. Students will acquire intensive knowledge on facts and principles of the engine, its components, and its systems. This course provides training to intermediate depot level maintenance repair and inspection procedures. Students are required to pass a written and or performance test at the end of certain blocks prior to advancement to the next block of instruction.

COURSE DESCRIPTION**BLOCK I – J-85 ENGINE MAIN SECTIONS**

This block begins with a course orientation, in which students learn about the academy's policies and procedures along with academic objective requirements. Students learn ground safety then proceed with a detailed description and familiarization of the J-85 engine's front frame, compressor, main frame, combustion chamber, turbine, exhaust section, and accessory section. The block concludes with a written exam and block assessment.

BLOCK II – J-85 ENGINE SYSTEMS

Students receive a complete description of the subsystems. This block covers a complete description and operation of the oil, fuel, and students learn to identify and inspect systems of the A-37 using the applicable work cards. Students also learn theory of operation and component location of the fuel system.

BLOCK III – ENGINE TEARDOWN

In this unit the student performs procedures for a complete engine teardown. Students perform procedures on the removal of engine accessories, main sections, and disassembly of subassemblies. They learn preventive corrosion procedures and inspection of a disassembled engine. Throughout this block student performance checks are used to evaluate student progress.

BLOCK IV – COMPRESSOR REPAIR

This block covers the disassembly and the assembly procedures of the compressor rotor assembly. Students complete a full teardown and inspection of the compressor rotor. They accomplish and use dynamic balancing and shadowgraph procedures for the buildup of the rotor. Additionally, this

block covers compressor stator case repair procedures. Throughout this block student performance checks are used to evaluate student progress.

BLOCK V – BUILDUP OF THE ENGINE

This block covers the build up of sub-assemblies, major sections, and installation of accessories on the engine. The students also perform engine-rigging procedures. Throughout this block student performance checks are used to evaluate student progress.

PREREQUISITES

1. Eligibility requirements: The student must have completed as a minimum, an apprentice course (Engine Technician Course, MASL D141255) or have one to two years of engine maintenance experience.

2. Physical/Medical requirements:

- a. **Vision:** Normal color vision
- b. **Hearing/Speech:** Normal Hearing
- c. **Other:** Normal manual dexterity

3. IAAFA entrance examinations:

- a. **General aptitude:** Minimum score of 20
- b. **Mechanical aptitude:** Minimum score of 20
- c. **Mathematics aptitude:** N/A
- d. **Electronics aptitude:** N/A

4. Uniform/Equipment: None, other than those mentioned in the General Clothing Requirements on page 4.

*** Summary of Changes:** N/A

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C-130 B/E/H AIRCRAFT ADVANCED COURSES**C-130 B/E/H AIRCRAFT TECHNICIAN****8 WEEKS****MASL D141259****STUDENT LOAD: MIN: 3 MAX: 8****COURSE OBJECTIVE**

This course will provide aircraft journeyman with basic troubleshooting skills, schematic interpretation and systems operation specific to the C-130 B/E/H aircraft. Additionally, students receive hands-on training of ground handling and systems/sub-systems operations. Students are required to pass a written and or performance test at the end of certain blocks prior to advancement to the next block of instruction.

COURSE DESCRIPTION**BLOCK I – AIRCRAFT GENERAL**

This block begins with a course orientation, in which students learn about the academy's policies, programs along with academic objective requirements. Students learn the principles of safety, accident prevention, and aircraft ground safety procedures. Students also learn how to select and interpret technical data, proper use, documentation, and filing of aircraft forms. Additionally, students learn aircraft airframe components, corrosion control, jacking and towing procedures.

BLOCK II – ELECTRICAL SYSTEMS

During block II, students learn about the C-130's AC/DC power supply systems and the electrically operated and controlled systems which include: lighting, power plant, fuel, utility, landing gear, flight controls, fire and overheat detection, and hydraulics.

BLOCK III – FUEL SYSTEMS

In block III students are now ready to learn specifics of the C-130 fuel system. Using technical publications, and trouble analysis charts, they learn the operating theory of the fuel system safety configuration, aircraft feed, dump, quantity indication, refuel/de-fuel and vent system. The block also covers fuel tank construction to include the fire suppression foam system. Additionally, students will learn about air refueling receptacles and Benson tanks.

BLOCK IV – UTILITY SYSTEMS

Block IV introduces students to the C-130's utility systems. Using technical publications and trouble analysis charts, students learn the theory and operational procedures of the bleed air system,

air turbine motor or auxiliary power unit, anti-ice system, under-floor heat, air conditioning system, pressurization system, liquid oxygen system and fire extinguisher system.

BLOCK V – HYDRAULIC SYTEMS

In block V, students learn the aircraft pneudraulics systems, components, and operation. They will learn the characteristics of and analyze malfunctions on hydraulic power, ramp, and aft cargo door, flight control hydraulic, and landing gear hydraulic systems.

BLOCK VI – PROPULSION SYSTEM

The course concludes with block VI, C-130 propulsion system. Students learn principles of the T-56-A-7B/T-56-A-15 engine. Students will also cover, oil, pneumatic fuel, temperature datum, ignition, main components, and trouble shooting operations. Finally, they learn principles of operation, inspection, and component location, and subsystems of the Hamilton standard propeller.

PREREQUISITES

1. Eligibility requirements: Completed as a minimum, the basic course (Aircraft Technician Course, MASL D141251 or two years of practical experience on the C-130 B/E/H aircraft.

2. Physical/Medical requirements:

- a. Vision:** Normal color vision
- b. Hearing/Speech:** Normal hearing
- c. Other:** Normal manual dexterity

3. IAAFA entrance examinations:

- a. General aptitude:** Minimum score of 20
- b. Mechanical aptitude:** Minimum score of 20
- c. Mathematics aptitude:** N/A
- d. Electronics aptitude:** N/A

4. Uniform/Equipment: None, other than those mentioned in the General Clothing Requirements on page 4.

*** Summary of Changes:** N/A

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C-130 B/E/H/ T-56 ENGINE TECHNICIAN**6 WEEKS****MASL D141260****STUDENT LOAD: MIN: 4 MAX: 10****COURSE OBJECTIVE**

The course is designed to provide advanced operating principles and theory of the T-56 engine to establish a solid maintenance foundation for journeymen. Students will be given thorough instruction to evaluate conditions and make proper repair decisions of engine operating systems and subsystems. Students are required to pass a written and or performance test at the end of certain blocks prior to advancement to the next block of instruction.

COURSE DESCRIPTION**BLOCK I – T-56 ENGINE FAMILIARIZATION**

This block begins with a course orientation, where students learn about the academy's policies, programs, and academic objective requirements. This block provides lecture and discussion on ground safety related to in-shop and flight line maintenance. They receive detailed information and characteristics of the engine reduction gearbox, compressor, combustion and turbine sections. Also different components of the T-56 engine are discussed in detail in this block. The block concludes with a written examination.

BLOCK II – T-56 SYSTEMS OPERATION

During this block, principles and theory of oil, pneumatic, fuel, temperature datum, ignition, and fire/overheat systems are lectured and discussed. Students are taken to the engine shop and aircraft to compliment the instruction. They are given thorough instruction to evaluate different engine conditions and make proper repair decisions of engine operating systems and subsystems. This block concludes with a written examination.

BLOCK III – IN-SHOP MAINTENANCE

This block covers the in-shop aspect of engine maintenance. Procedures for engine removal and installation, hot section disassembly and reassembly, as well as accessories removal and installation are taught in this block. Students learn inspection procedures and engine adjustments. They will also learn the use of troubleshooting diagrams, and technical orders for each system. This block concludes with a written examination.

PREREQUISITES

1. Eligibility requirements: Completion of the basic course (Engine Apprentice Technician Course, MASL D141255) or 2 years of practical experience or flight engineer experience.

2. Physical/Medical requirements:

a. Vision: Normal color vision

b. Hearing/Speech: Normal hearing

c. Other: Normal manual dexterity

3. IAAFA entrance examinations:

a. General Aptitude: Minimum score of 20

b. Mechanical Aptitude: Minimum score of 20

c. Mathematics Aptitude: N/A

d. Electronics Aptitude: N/A

4. Uniforms/Equipment: No special uniforms or equipment are required other than those mentioned in the General Clothing Requirements on page 4.

*** Summary of Changes:** N/A

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C-130 B/E/H PROPELLER TECHNICIAN**5 WEEKS****MASL D141261****STUDENT LOAD: MIN: 4 MAX: 10****COURSE OBJECTIVE**

This course is designed to provide C-130 B/E/H propeller technicians advanced operational theory and hands-on maintenance training in order to establish a solid craftsman foundation. With the extensive knowledge furnished by the curriculum, the students are able to analyze facts and draw conclusions related to operation and troubleshooting of the propeller's systems and subsystems. Students are required to pass a written and or performance test at the end of certain blocks prior to advancement to the next block of instruction.

COURSE DESCRIPTION**BLOCK I – PROPELLER FAMILIARIZATION**

This block begins with a course orientation, where students learn about the academy's policies, programs, and academic objective requirements. This is followed by a comprehensive overview of ground safety related to in-shop and flightline maintenance. Students receive general information, construction characteristics, and operational theory of the 54H60 propeller and its major components. Items discussed include the dome assembly, low-pitch stop assembly, pitch-lock regulator assembly, the barrel and blades, and the propeller control assembly including the pump and valve housings. This block of instruction concludes with a written examination.

BLOCK II – PROPELLER ELECTRICAL SYSTEMS

The students receive information about the operational theory and troubleshooting of the propeller's electrical systems. Systems taught include anti-icing, de-icing, and the synrophaser systems. The use of technical orders to troubleshoot propeller electrical system problems is stressed throughout the block. Students receive fundamental knowledge on how to read electrical schematics in order to troubleshoot different propeller malfunctions. This block concludes with a written examination.

BLOCK III – FLIGHTLINE AND IN-SHOP MAINTENANCE

The purpose of the third and final block of instruction is hands-on maintenance training. Propeller complete disassembly and assembly are discussed throughout this block. Inspection of the propeller blades, barrel halves, contact ring, pump housing and dome assemblies are also discussed in detail. The instructor demonstrates all propeller maintenance procedures to the student in order to introduce the use of technical orders and special tools. The students perform maintenance procedures following technical orders and safety guidelines.

PREREQUISITES

1. Eligibility requirements: This course is designed for technicians that have completed an apprentice-level propeller technician course or have 1 to 2 years of propeller maintenance experience.

2. Physical/Medical requirements:

- a. Vision:** Normal color vision
- b. Hearing/Speech:** Normal hearing
- c. Other:** Normal manual dexterity

3. IAAFA Entrance examinations:

- a. General aptitude:** Minimum score of 20
- b. Mechanical aptitude:** N/A
- c. Mathematics aptitude:** N/A
- d. Electronics aptitude:** N/A

4. Uniform/Equipment: None, other than those mentioned in the General Clothing Requirements on page 4.

*** Summary of Changes:** N/A

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ADVANCED MAINTENANCE COURSES**F-5 E/F AIRCRAFT TECHNICIAN****8 WEEKS****MASL 148202****STUDENT LOAD: MIN: 4 MAX: 10****COURSE OBJECTIVE**

The course is designed to provide the aircraft technicians advanced operating principles and theory specific to the F-5 aircraft. Students will acquire extensive knowledge on analyzing facts and principles to draw conclusions of operation and troubleshooting aircraft systems and subsystems. Students are required to pass a written and or performance test at the end of certain blocks prior to advancement to the next block of instruction.

COURSE DESCRIPTION**BLOCK I – GENERAL INFORMATION**

This block begins with a course orientation, in which students learn about the academy's policies and procedures along with academic requirements. Students are provided detailed lectures and discussions on aircraft danger areas, ground safety, and aircraft familiarization. They learn detailed instruction in the use of technical orders, system schematics, troubleshooting charts, and aircraft forms. This block of instruction concludes with a written exam.

BLOCK II – CANOPY, EGRESS AND ENVIRONMENTAL SYSTEM

During block II, students learn the major sections of the egress system, operation and inspection procedures of the canopy system. Students also perform hands-on operational and rigging checks of the canopy system. The function and operation of the ejection seat is also discussed. Next, students learn the operation and troubleshooting procedures of the environmental control systems and subsystems, such as air conditioning, canopy pressurization, de-fog system, anti-g, canopy seal systems, and liquid oxygen. Detailed instruction in the use of technical orders, system schematics, troubleshooting charts and safety practices will be stressed. This block of instruction concludes with a written exam.

BLOCK III – AIRCRAFT SYSTEMS

In block III, students learn the identification and operational checks of the following: AC/DC electrical system, internal and external fuel systems, hydraulic flight control and utility systems, and engine systems and subsystems. They also receive detailed instructions on the use of schematics, troubleshooting charts, and the use of technical orders for each system and subsystem. This block of instruction concludes with a written exam.

BLOCK IV – LANDING GEAR SYSTEM

After a thorough understanding of the aircrafts systems students receive extensive hands-on operational checks and troubleshooting technique procedures on the landing gear system. Students are able to identify major components, operational and troubleshooting procedures of the nose gear, nose steering, hike system, alternate landing gear system, and the arresting hook system. They will accomplish thorough hands-on operational checks, inspection and adjustments of the landing gear system and wheel and brakes system. They also receive detailed instructions on the use of schematics, troubleshooting charts, and the use of technical orders for each system and subsystem. This block of instruction concludes with a written exam.

BLOCK V – FLIGHT CONTROL SYSTEM

During the final block of instruction, students receive extensive knowledge on analyzing facts and principles of the primary and secondary flight control systems. They are able to identify characteristics, operation of primary components, and conduct troubleshooting procedures of the aileron, rudder, and horizontal stabilizer systems. Instruction also includes characteristics of operation on secondary major components and troubleshooting procedures of the stability augmentation system (SAS), speed brakes, flaps and drag chute systems. Students will accomplish meticulous hands-on operational checks/inspection and adjustments of the flight control system. Finally, students receive detailed instructions on the use of schematics, troubleshooting techniques, and use of technical orders for each system and subsystem. This block of instruction concludes with a written exam.

PREREQUISITES

1. Eligibility Requirements: This course is structured for all aircraft technicians that are required to accomplish in-depth maintenance practices on the F-5 aircraft. Technicians should have completed as a minimum, the basic course Aircraft Jet Crew Chief MASL D141251, or have 2 years practical experience in fighter aircraft.

2. Physical/Medical requirements:

- a. **Vision:** Normal color vision
- b. **Hearing/Speech:** Normal hearing
- c. **Other:** Normal manual dexterity

3. IAAFA entrance examinations:

- a. **General aptitude:** Minimum score of 20
- b. **Mechanical aptitude:** Minimum score of 20

c. Mathematics aptitude: N/A

d. Electronics aptitude: N/A

4. Uniform/Equipment: None, other than those mentioned in the General Clothing Requirements on page 4.

*** Summary of Changes:** N/A

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T-53-L-13 ENGINE TECHNICIAN**5 WEEKS****MASL D141242****STUDENT LOAD: MIN: 4 MAX: 8****COURSE OBJECTIVE**

This course is designed to provide jet engine technicians with a thorough understanding of all T-53-L-13B engine systems and maintenance procedures. Students learn the necessary skills to perform intermediate and organizational level maintenance on the T-53 -L-13B engine. Students are required to pass a written and or performance tests at the end of certain blocks prior to advancement to the next block of instruction.

COURSE DESCRIPTION**BLOCK I – ENGINE SYSTEM FAMILIARIZATION AND OPERATION**

This block begins with a course orientation, in which students learn about the academy's policies and procedures along with academic requirements. Immediately afterwards, students begin learning the general characteristics and theory of operation of the T-53-L-13B engine. With a strong foundation in theory of operation, students begin in-depth study of oil, torque meter, fuel, electrical, variable guide vane, compressor, bleed air, and anti-icing systems.

BLOCK II – T-53 ENGINE COMPONENTS AND MAINTENANCE PROCEDURES

The students receive instructions and are made aware of general safety issues concerning T-53 engine maintenance. The second block covers general maintenance and inspection concepts, removal and inspection of reduction gear assembly, removal of N1 accessories and gearbox assembly, and upper compressor case removal and inspection. The 2J-T-53-16 engine technical manual is explained in detail. Students learn how to proficiently use it to find information to remove, disassemble, and inspect the combustion and turbine assembly. The students receive hands-on experience on the tear-down and build-up of the T-53-L-13B engine to include: inspection of the diffuser section; removal, inspection, and installation of the fuel control and its designated filters. This block of instruction culminates with engine preservation, storage procedures and is measured with a written examination.

BLOCK III – UH-1H HELICOPTER ENGINE MAINTENANCE

Students are familiarized with engine related systems on the UH-1H helicopter. They learn to safely remove, inspect, and install the T-53-L-13B engine. They also learn to properly adjust engine controls for normal operation. The last unit in this block deals with a discussion on troubleshooting procedures of all engine systems. This block of instruction ends with a written examination and course assessment.

PREREQUISITES

1. Eligibility requirements: This course is open to military or civilian personnel who have completed an apprentice-level jet engine course or two years of practical experience in the jet engine field.

2. Physical/Medical requirements:

- a. Vision:** Normal color vision
- b. Hearing/Speech:** Normal hearing
- c. Other:** Normal manual dexterity

3. IAAFA entrance examination:

- a. General aptitude:** Minimum score of 20
- b. Mechanical aptitude:** Minimum score of 20
- c. Mathematics aptitude:** N/A
- d. Electronics aptitude:** N/A

4. Uniform/Equipment: None, other than those mentioned in the General Clothing Requirements on page 4.

*** Summary of changes:** N/A

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PT-6A ENGINE TECHNICIAN**4 WEEKS****MASL D141280****STUDENT LOAD: MIN: 3 MAX: 10****COURSE OBJECTIVE**

This course is designed to provide PT-6 engine technicians advanced operational theory and hands-on maintenance training in order to establish a solid craftsman foundation, with extensive knowledge on intermediate level maintenance repair skills. The student will analyze facts and draw conclusions related to operation and troubleshooting of the PT-6 engine and engine systems. Students are required to pass a written and or performance test at the end of certain blocks prior to advancement to the next block of instruction.

COURSE DESCRIPTION**BLOCK I – PT-6 ENGINE FAMILIARIZATION**

This block begins with a course introduction, in which students learn about the academy's policies and procedures along with academic requirements. Students are then given an orientation of the aircraft and engine maintenance campus and academic objective requirements. Immediately afterwards students receive a thorough description of the PT-6 engine main sections, engine air system, engine lubrication system, engine start system, engine fuel system, engine controls and instruments. Finally, the students are given a comprehensive written examination covering everything learned throughout this block of instruction.

BLOCK II – HOT SECTION INSPECTION AND MAINTENANCE

This block covers full engine teardown and build up procedures. This includes hot section inspection, and general inspection procedures, engine power section removal, compressor turbine segment measurement and grinding procedures, and installation of the gearbox and external components. This block of instruction concludes with a written exam and course assessment

PREREQUISITES:

1. Eligibility requirements: The student must have completed as a minimum, an apprentice course (Engine Technician Course, MASL D141255) or have 1 to 2 years of engine maintenance experience.

2. Physical/Medical requirements:

a. Vision: Normal color vision

b. Hearing/Speech: Normal hearing

c. Other: Normal manual dexterity

3. IAAFA Entrance examinations:

a. General aptitude: Minimum score of 20

b. Mechanical aptitude: Minimum score of 20

c. Mathematics aptitude: N/A

d. Electronics aptitude: N/A

4. Uniform/Equipment: None, other than those mentioned in the General Clothing Requirements on page 4.

*** Summary of Changes:** N/A

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UH-1H HELICOPTER TECHNICIAN**7 WEEKS****MASL D141304****STUDENT LOAD: MIN: 4 MAX: 8****COURSE OBJECTIVE**

This course was designed to provide the apprentice level helicopter crew chief with specific advanced maintenance on the UH-1H airframe and its systems. Emphasis is placed on those tasks that relate to the journeymen level such as operating adjustments, component overhaul and troubleshooting of most common helicopter anomalies.

COURSE DESCRIPTION**BLOCK I - GENERAL FAMILIARIZATION**

This block begins with flight line safety responsibilities at the supervisory level. Students will receive a thorough understanding of flight controls and rigging procedures. They are familiarized with tasks related to airframe and landing gear inspections, landing gear cap adjustments, deflection checks and weigh the helicopter using load cells. Flight control inspections are performed and troubleshooting procedures discussed. Rigging procedures are performed on the collective, cyclic and tail rotor flight control systems.

BLOCK II - T-53-L-13 TURBOSHAFT ENGINE MAINTENANCE

Adjustment and troubleshooting of the T-53 turbo shaft engine and its components is the focus in this block. Students will perform engine throttle and power control rigging. They will also perform engine to transmission alignment and starting engine procedures using the UH-1 systems trainer.

BLOCK III - ROTORS AND DRIVE TRAIN SYSTEM

Main and tail rotor hub assembly inspection and overhaul procedures are accomplished. The main rotor hub is disassembled and reassembled with special emphasis on seal replacement. Wear limitations are identified and discussed. Dynamic balancing procedures of main and tail rotors are accomplished through hands-on training. The student will learn the operating characteristics of the drive train system. They will also become skilled on how to disassemble and reassemble the drive shaft hanger bearings and main drive shaft. Students will gain knowledge of operating principals of all gearboxes. They will learn to remove, inspect, and install the 42 degree and 90 degree gearboxes

BLOCK IV - HELICOPTER VIBRATIONS AND VIBRATION ANALYSIS EQUIPMENT

In this block the student is taught vibration characteristics and their effects on the helicopter airframe and rotating components. They will learn to install and use vibration analysis equipment and apply troubleshooting techniques to solve vibration problems. Students will install actual equipment on aircraft and apply troubleshooting procedure with a whirly-gig simulator to reduce vibrations. An in-depth introduction to the 8500 spectrum analyzer, its use and function is described.

PREREQUISITES

1. Eligibility requirements: This course is open to military or civilian personnel who have completed the helicopter crew chief course (MASL D141257 or equivalent) or have 1 year of practical experience on any rotary wing aircraft.

2. Physical/Medical requirements:

- a. **Vision:** Normal color vision
- b. **Hearing/Speech:** Normal hearing
- c. **Other:** Normal manual dexterity

3. IAAFA Entrance examination:

- a. **General aptitude:** Minimum score of 20
- b. **Mechanical aptitude:** Minimum score of 20.
- c. **Mathematics aptitude:** N/A
- d. **Electronics aptitude:** N/A

4. Uniform/Equipment: None, other than those mentioned in the General Clothing Requirements on page 4.

***Summary of changes:** N/A

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UH-1N HELICOPTER TECHNICIAN**7 WEEKS****MASL D141322****STUDENT LOAD: MIN: 4 MAX: 8****COURSE OBJECTIVE**

This course was designed to provide the apprentice level helicopter crew chief with specific advanced maintenance on the UH-1N airframe and its systems. Emphasis is placed on those tasks that relate to the journeymen level such as operating adjustments, component overhaul and troubleshooting of most common helicopter anomalies. Students are required to pass a written and/or performance test at the end of certain blocks prior to advancement to the next block of instruction.

COURSE DESCRIPTION**BLOCK I – AIRFRAME MAINTENANCE**

This block begins with a course orientation, where students learn about the academy's policies, programs, and academic objective requirements. Students will receive a thorough understanding of safety and supervisor roles on the flight line. They are familiarized with tasks related to ground handling, airframe, and landing gear maintenance requirements to include weighing the helicopter using load cells. This block will also familiarize students with the fundamental theory of operation, purpose, and component location of helicopter systems to include utility, hydraulic, electrical, radio, and instruments.

BLOCK II – TWIN PACK POWER PLANT

Adjustment and troubleshooting of the T-53 turbo shaft engine and its components is the focus in this block. Students will perform engine throttle rigging, power turbine Nf rigging, power lever control Ng rigging, droop compensator rigging, and beep actuator control rigging. They are also familiarized with the fuel system operation and starting engine procedures using the UH-1 systems trainer

BLOCK III – ROTORS AND DRIVE TRAIN SYSTEM

This block begins with rotary wing aerodynamic principals, and main rotor and tail rotor function. The main rotor hub disassembly, inspection, and reassembly procedures will be accomplished. The students will also learn swashplate assembly overhaul procedures. Wear limitations are identified and discussed. The students will learn the operating characteristics of the drive train system and the main input quill seal replacement procedures. They will also become skilled on how to disassemble, inspect, and reassemble the drive shaft hanger bearings and main drive shaft. Students

will gain knowledge of operating principals of all gearboxes to include main transmission, 42 degree, and 90 degree gearbox maintenance procedures.

BLOCK IV – FLIGHT CONTROLS, VIBRATIONS, AND INSPECTION SYSTEMS

In this block students are taught flight control systems, rigging procedures, and UH-1 vibration characteristics and causes. They will learn to use vibration analysis equipment, install vibration analysis equipment, application of the 8500-vibration analyzer, and they will use a Heli-sim workshop. Students are also instructed on how to perform different types of required inspections and proper documentation procedures.

PREREQUISITES

- 1. Eligibility requirements:** This course is open to military or civilian personnel, who have completed the helicopter crew chief course (MASL D141257 or equivalent) or have 1 year of practical experience on any rotary wing aircraft.
 - 2. Physical/Medical requirements:**
 - a. Vision:** Normal color vision
 - b. Hearing/Speech:** Normal hearing
 - c. Other:** Normal manual dexterity
 - 3. IAAFA entrance examination:**
 - a. General aptitude:** Minimum score of 20
 - b. Mechanical aptitude:** Minimum score of 20
 - c. Mathematics aptitude:** N/A
 - d. Electronics aptitude:** N/A
 - 4. Uniform/Equipment:** None, other than those mentioned in the General Clothing Requirements on page 4.
- * Summary of changes:** N/A

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A/M32A-86D DIESEL GENERATOR (HOBART)**5 WEEKS****MASL D141311-01****STUDENT LOAD: MIN: 3 MAX: 8***** COURSE OBJECTIVE**

This course is designed for Aerospace Ground Equipment technicians with minimal experience working with the A/M32A-86D Diesel generator. Emphasis is placed on diesel engine operation procedures and troubleshooting of the electrical system. Students are required to pass written tests on all blocks, also performance checks at the end of Block III

COURSE DESCRIPTION*** BLOCK I – FUNDAMENTALS**

This block begins with a course orientation, in which students learn about the academy's policies and procedures along with academic requirements. Students are taught basic principles of electricity, voltage, current, resistance, Ohm's law, atomic structure, magnetism, resistive circuits, and electrical symbols. They will apply this knowledge to troubleshoot electrical circuits at the end of Block III. Students are taught to interpret wiring diagrams and alternating/direct current generator principles.

*** BLOCK II – DIESEL ENGINES**

Students receive instruction on 2 and 4 cycle diesel engines. They are taught in detail component function, description, and operational fundamentals of the diesel engine, also receive instruction in fundamentals of fuel, lubrication, cooling, and airflow induction systems.

***BLOCK III – A/M32A-86D DIESEL GENERATOR SET**

During the final block of instruction, students will learn the diesel generator set capabilities, service inspection, and testing of the unit. They are taught component location, functions, and electric schematic diagrams with emphasis placed on electrical system troubleshooting.

PREREQUISITES

1. Eligibility requirements: Open to all personnel; enlisted, officers, and civilians who have at least 2 years of practical experience working with aerospace ground equipment.

2. Physical/Medical requirements:

- a. **Vision:** Normal color vision.
- b. **Hearing/Speech:** Normal hearing.
- c. **Other:** Normal manual dexterity.

3. IAAFA Entrance examinations:

- a. **General aptitude:** Minimum score of 20
- b. **Mechanical aptitude:** Minimum score of 25
- c. **Mathematics Aptitude:** Minimum score of 20
- d. **Electronics aptitude:** Minimum score of 20

4. Uniform/Equipment: None, other than those mentioned in the General Clothing Requirements on page 4.

*** Summary of Changes:** Course title, course objective, course content and prerequisites changed.

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To train and educate Latin American
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